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EXPERIMENTAL HISTORY OF EVERY NATURAL AND ARTIFICIAL SUBSTANCE

MADE USE OF IN

MEDICINE:

WITH A COMPENDIOUS VIEW OF THEIR

NATURAL HISTORY,

AN ACCOUNT OF THEIR PHARMACEUTIC PROPERTIES,

And an Estimate of their Medicinal Powers,

So far as they can be ascertained by Experience, or by rational Induction from their sensible Qualities.

By WILLIAM LEWIS, M.B. F.R.S.

IN TWO VOLUMES.

VOL. II.

THE FOURTH EDITION,

WITH NUMEROUS ADDITIONS AND CORRECTIONS,

By JOHN AIKIN, M.D.

Rationalem quidem puto Medicinam esse debere:
instrui vero ab evidentibus. CELSUS.

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THE

MATERIA MEDICA.

JACOBÆA.

JACOBÆA Pharm. Pariſ. Jacobæa vulgaris laciniata C. B. Senecio major ſive flos ſancti jacobi Matthiol. Senecio Jacobæa Linn. RAGWORT: a plant with a firm round ſtalk generally purpliſh; oblong dark green leaves, deeply jagged almoſt to the rib, and the ſections jagged again and ſomewhat crumpled: on the tops of the ſtalks grow umbel-like cluſters of yellow flowers, of the radiated diſcous kind, followed by ſmall oblong ſeeds winged with down. It is perennial, common in uncultivated fields and by road ſides, and flowers in July.

THE leaves of ragwort have a roughiſh bitteriſh ſubacrid taſte, extremely nauſeous, far different from that of the herbaceous groundſel to which they have by ſome been accounted ſimilar. Simon Paulli relates, that they were

found of great ſervice in an epidemic camp dyſentery, many ſoldiers having been cured of that diſeaſe by drinking a decoction of them; and expreſſes ſome concern, that a medicine of ſo much efficacy ſhould be at the ſame time ſo very diſguſtful to the palate. This however is an inconvenience that may be eaſily palliated: the active matter of ragwort, whatever its virtue may be, is diſſolved both by water and by rectified ſpirit, and on inſpiſſating the filtered tinctures, remains concentrated in the extracts; which may be taken, without offence to the palate, in the form of a bolus or pill. The ſpirituous extract is in leſs quantity than the watery, and proportionably ſtronger in taſte; though rather leſs nauſeous than the herb in ſubſtance.

JALAPIUM.

JALAPIUM Pharm. Lond. Jalapa Pharm. Edinb. Machoacanna nigra. JALAP: the dried root of the *mirabilis peruviana* or marvel-of-peru, *mirabilia peruviana Gerard. ſolanum mexicoanum flore parvo C. B. Convolvulus Jalapa Linn.* (a)* a plant with thick, fleſhy radiſh-like roots; jointed ſtalks and branches; acuminated ſomewhat oval leaves ſet in pairs; and elegant, numerous, monopetalous, funnel-ſhaped flowers, purple, yellow, white, or diverſely variegated, ſtanding in double cups, of which the innermoſt incloſes the flower and the outer ſurrounds its baſis: each flower is followed by a wrinkled, roundiſh,

* *(a)* The later botaniſts are not perfectly agreed concerning the genus of the plant producing jalap. Linnæus firſt made it a *mirabilis*; and Bergius now gives it as the *mirabilis dichotoma Linn.* from the reſemblance between the root of that plant and the jalap of the ſhops.

pentagonal

pentagonal umbilicated fruit, about the ſize of a pepper corn, including a white kernel. It is perennial, a native of the Weſt Indies, and cultivated in our gardens on account of the beauty and duration of its odoriferous flowers, which open only during the night, and of which it produces continual ſucceſſions from June or July till checked by froſts; at which time the roots, which do not endure our winter, are taken up, and preſerved in ſand till ſpring. Whether the roots produced here are equivalent in virtue to thoſe which are brought from abroad, has not, that I know of, been tried.

The officinal jalap roots come from the province of Xalapa in New Spain; in thin tranſverſe ſlices, ſolid, hard, weighty, of a blackiſh colour on the outſide or cortical part, internally of a dark greyiſh with ſeveral black circular ſtriæ: the hardeſt, darkeſt coloured, and thoſe which have the moſt of theſe reſinous veins, are the beſt. Slices of bryony root, which are ſaid to be ſometimes mixed with them, may be diſtinguiſhed by their whiter colour and leſs compact texture.

This root has ſcarcely any ſmell, and very little taſte upon the tongue: ſwallowed, it affects the throat with a ſlight kind of pungency and heat. Taken in doſes of a ſcruple or half a dram, it proves an effectual and in general a ſafe purgative; very rarely occaſioning any ſevere gripes or nauſea, which too frequently accompany the other ſtrong cathartics. Some have prohibited the uſe of this cathartic to children; probably on no very good foundation. Young children, from the laxity of their ſolids, and the ſoft lubricating quality of their food, generally bear theſe kinds of medicines better than

adults, and adults of a ſpungy, lax, or weak habit, better than the rigid or robuſt. Few, if any, of the ſtrong reſinous purgatives are in either caſe more innocent than jalap.

Jalap root, digeſted in as much rectified ſpirit as will cover it to the height of about four fingers, gives out greateſt part of the reſinous matter in which its activity reſides, and tinges the menſtruum of a yellowiſh brown colour. On inſpiſſating the filtered tincture to about one half, and adding to the remainder a proper quantity of water, the liquor becomes milky, and on ſtanding depoſites the pure reſin. This preparation, given by itſelf, irritates and gripes violently, without proving conſiderably purgative: thoroughly triturated with teſtaceous or other powders, or with ſoap; or ground with almonds or powdered gum-arabic, and made into an emulſion with water; or diſſolved in rectified ſpirit, and mixed with a proper quantity of ſyrup, that the ſolution may bear being diluted with watery liquors without precipitation; it purges, in doſes of eight or ten grains, as effectually, and for the moſt part as mildly, as the jalap in ſubſtance.

The jalap remaining after ſufficient digeſtion with ſpirit, has no cathartic virtue: boiled in water, it gives out a mucilaginous ſubſtance, which operates only by urine. Water applied at firſt takes up a portion of the reſin along with the gum, and hence the watery decoction and extract prove weakly cathartic as well as diuretic: the root ſtill retaining great part of its reſin, ſo as to purge conſiderably. The reſinous and gummy parts may be united into one extract, by firſt drawing a tincture from the powdered root with rectified ſpirit, then boiling the reſiduum in freſh quantities of water, evaporating the

the decoctions till they begin to grow thick, mixing in by degrees the tincture inſpiſſated to a like thickneſs, and continuing a gentle heat till the whole is reduced to a due conſiſtence. This extract may be taken by itſelf in doſes of twelve grains or more: the gummy matter of the jalap being ſufficient to divide the reſin and prevent its too violent irritation. Extractum jalapii *Ph. Lond. & Ed.*

The proportion of active matter differs greatly in different parcels of the jalap; ſixteen ounces of ſome ſorts yielding hardly two of reſin, while the ſame quantity of others affords three or four. Hence the extracts of jalap appear preferable to the root in ſubſtance, not only on account of the doſe being rendered ſmaller by the rejection of the woody parts, but likewiſe as being more uniform and certain in ſtrength. Tinctures of jalap made in proof ſpirit are nearly ſimilar in quality to the gummy reſinous extract, this menſtruum taking up both the reſinous and gummy parts of the root: theſe preparations, made from different kinds of jalap, will vary in ſtrength ſomewhat more than the ſolid extract or reſin, but not ſo much as ſome have ſuſpected, or as the roots in ſubſtance; for in the proportions uſually employed, the proof ſpirit does not take up the whole of the virtue of any kind of jalap, and perhaps it does not extract much more from one kind than from another, provided the jalap be of moderate goodneſs. If three† or four‡ ounces of jalap be digeſted in a pint of proof ſpirit, the reſiduum will ſtill give out a portion of reſinous matter to rectified ſpirit, and this reſin will be in greater quantity in proportion as the root itſelf was the more reſinous. Tinct. jalap. † *Ph. Ed.* ‡ *Ph. Lond.*

ICHTHYOCOLLA.

ICHTHYOCOLLA Pharm. Lond. ISINGLAS or FISH-GLUE: a ſolid glutinous ſubſtance, prepared from a fiſh of the ſturgeon kind, caught in the rivers of Ruſſia and Hungary. The ſkin, fins, &c. are boiled in water, the decoction inſpiſſated to a due conſiſtence, and then poured out ſo as to form thin cakes; which are either exſiccated in that form, or cut while ſoft into ſlices and rolled up into ſpiral, horſe ſhoe, and other ſhapes. The beſt is in thin, clear, and almoſt tranſparent pieces.

* A different account of the formation of iſinglaſs is given by Mr. Jackſon in *Philoſ. Tranſ.* vol. lxiii. part I. He aſſerts that the ſolution of animal ſubſtances of every kind gives *glue*, not *iſinglaſs*; that this laſt is nothing more than certain membranous parts of fiſhes, as the air-bladder, inteſtines, peritonæum, &c. in their entire ſtate, only freed from their natural mucus and adhering matters, and rolled and twiſted into the forms in which we get it.

ICHTHYOCOLLA is one of the pureſt and fineſt of the animal glues, of no particular ſmell or taſte. Beaten into ſhreds, it diſſolves pretty readily in boiling water or milk, and forms a gelatinous ſubſtance, which yields a mild nutriment, and proves uſeful medicinally in ſome diſorders ariſing from a ſharpneſs and colliquation of the humours. A ſolution of it in water, curiouſly ſpread, whilſt hot, upon ſilk, affords an elegant ſticking plaſter for ſlight injuries of the ſkin, not eaſily ſeparable from the part by water, and ſcarcely inferiour to the more compounded one ſold under the name of the ladies black plaſter,

plaſter, in which different balſams and reſins are joined to the ichthyocolla.

ILLECEBRA.

ILLECEBRA, Vermicularis, Piper murale, Sedum minus. Sempervivum minus vermiculatum acre C. B. Sedum acre Linn. WALLPEPPER or STONECROP: a ſmall plant, having its ſtalks covered with little fleſhy conical leaves ſet thick together in the manner of ſcales: on the tops appear pentapetalous yellow flowers, each of which is followed by ſeveral pods full of ſmall ſeeds. It is annual, grows on old walls and dry ſtony grounds, and flowers in July.

THIS plant has a very acrid taſte, and no remarkable ſmell: applied externally, it veſicates the part: taken internally, in no great quantity, it proves ſtrongly emetic. Its active matter appears, from the accounts given by authors, to be in great part forced out along with the watery juice by expreſſion; to diſſolve both in water and fermented liquors by infuſion; and not to be diſſipated, or not ſoon, by boiling. It is ſaid to have been uſed with ſucceſs in ſundry chronical diſorders *(a)*, but its durable acrimony, and the great vehemence of its operation, have prevented its being received in practice.

IMPERATORIA.

IMPERATORIA Pharm. Edinb. Imperatoria major C. B. Imperatoria aſtrutium Lob. & Linn. Aſtrantia Dod. Smyrnion hortenſe Trag. Stru-

(a) Below, *Eph. nat. curioſ. dec.* i. *ann.* vi. & vii. *obſ.* 22. Boerhaave, *hiſt. plant. p.* 369.

thium hodie vocatum Cord. MASTERWORT: an umbelliferous plant, with large winged leaves divided into three indented ſegments; producing thick oblong, ſtriated ſeeds ſurrounded with a narrow leafy margin: the roots are oblong, thick, knobby, jointed, with ſeveral lateral fibres, brown on the outſide and whitiſh within. It is perennial, a native of the Alps and Pyreneans, from whence we are ſupplied with roots ſuppoſed to be ſuperiour to thoſe which are raiſed in our gardens.

THE root of imperatoria is a very warm and moderately grateful aromatic, nearly of the ſame nature with that of angelica. Infuſed in water, or digeſted in rectified ſpirit, it impregnates both menſtrua ſtrongly with its fragrant ſmell; the former weakly, the latter ſtrongly, with its warmth, pungency, and bitteriſhneſs; the former with a muddy browniſh, the latter with a bright yellow colour. On inſpiſſating the ſpirituous tincture, very little of its flavour exhales with the ſpirit: the remaining deep yellow extract ſmells moderately of the root, and impreſſes on the organs of taſte a conſiderable bitterneſs and glowing pungency. Water carries off in evaporation nearly all the ſpecific flavour of the maſterwort, leaving, in the dark brown extract, a nauſeous bitterneſs with a ſlight degree of warmth or acrimony.

IPECACOANHA.

IPECACUANHA Pharm. Lond. & Edinb. Hipecacuanna; Radix brazilienſis. Pſychotria emetica

*emetica Linn.**(a)* IPECACOANHA: a ſlender root, brought from the Spaniſh Weſt Indies, in ſhort pieces, variouſly bent and contorted, full of wrinkles and deep circular fiſſures, which reach quite down to a ſmall whitiſh woody fibre that runs in the middle of each piece: the cortical part is compact, brittle, and looks ſmooth and reſinous on breaking. Two ſorts of this root are met with in the ſhops, one brought from Peru, the other from Brazil; uſually denominated from their external colour, the firſt *whitiſh*, *grey*, or *aſh-coloured*, the other *brown* ipecacoanha.*(b)* The firſt is generally preferred, being found to operate with the greateſt certainty and mildneſs.

A root has been brought over under the name of white ipecacoanha, which has little or nothing of the virtues of the two foregoing: this is readily diſtinguiſhed by its yellowiſh white colour, woody texture, and having no fiſſures or wrinkles. More dangerous abuſes have ſometimes been committed, by the ſubſtitution or mixture of the roots of an American *apocynum*, which have been found to operate with great violence both upwards and downwards, and in ſome inſtances, as is ſaid, to prove fatal: theſe may be known by their being larger than the true ipecacoanha, the fiſſures more diſtant, the intermediate ſpaces ſmoother, and more particularly by the colour of the medullary fibre, which in the poiſonous roots is a deep reddiſh yellow, in the true ipecacoanha a whitiſh or pale greyiſh.

*(a) This is the name given it in the ſupplement to Linnæus: it was formerly reckoned by him a ſpecies of *Lonicera*.

*(b) Both kinds have been found in the neighbourhood of Rio di Janeiro. *Lond. Med. Journ.* ix. 69.

IPECACOANHA has ſcarcely any ſmell, unleſs during its pulverization or infuſion in liquors, in which circumſtances it emits a faint nauſeous one: in chewing, the wrinkled cortical part proves bitteriſh and ſubacrid, and covers the tongue as it were with a kind of mucilage; the medullary woody fibre is nearly inſipid, and gives out to menſtrua very little active matter. Geoffroy obſerves, that in pulverizing conſiderable quantities, the finer powder that flies off, unleſs great care be taken to avoid it, is apt to affect the operator with a difficulty of breathing, a ſpitting of blood, a bleeding at the noſe, or a ſwelling and inflammation of the eyes and face, and ſometimes of the throat; and that theſe ſymptoms go off in a few days, either ſpontaneouſly, or by the aſſiſtance of venæſection. *In the Philoſophical Tranſactions, vol. lxvi. part I. is a remarkable caſe of violent aſthmatic fits in a lady cauſed by the effluvia of powdered ipecacoanha.

THIS root is the mildeſt and ſafeſt emetic that has yet been diſcovered; and may be ventured on almoſt in the loweſt circumſtances where the ſtomach requires to be unloaded. The common doſe is from ten grains to a ſcruple and upwards: in the medical obſervations and inquiries publiſhed by a ſociety of phyſicians in London, a great number of caſes are mentioned, in which two grains operated ſufficiently: in conſtitutions which bore vomiting ill, and which were greatly ruffled by the uſual doſes, two or three grains operated with great eaſe. Where it fails of operating upwards, it commonly purges, and ſometimes conſiderably: in this intention it may be employed, in ſeveral caſes, to advantage, in conjunction with other purgatives,

to

to determine its action downwards: I have found fifteen grains of jalap, with two or three of ipecacoanha, purge more than twice the quantity of jalap by itself.

The ipecacoanha was first introduced, about the middle of last century, as a specific in dysenteries; and repeated experience has confirmed its efficacy in this distemper, not only when used as an emetic, but likewise when given in such small doses as scarcely to affect the grosser emunctories. In common dysenteric fluxes, it frequently performs a cure in a very short space of time; not by its exerting an astringent power, as some have supposed, for it does not appear to have any real astringency; nor by its mucilaginous substance covering the intestines and incrassating thin humours, as others with more plausibility, have inferred both from its mucilaginous taste, and from the ropiness and sliminess which it manifestly communicates to the contents of the stomach; but apparently by promoting perspiration, the freedom of which is in these cases of the utmost importance, and an increase of which, even in a state of health, is generally observed to diminish the evacuation by stool. In common dysenteries, the skin is for the most part dry and tense, and perspiration obstructed: and indeed this obstruction, and the conversion of the perspirable matter upon the intestines, is very frequently the immediate cause of the disease. Most of the common diaphoretics pass off, in these cases, without effect: but ipecacoanha, if the patient, after a puke or two be covered up warm in bed, brings on a free diaphoresis or a plentiful sweat, by which I have often known the distemper terminated at once.

In

In putrid or malignant dyſenteries, or where the patient breathes a tainted air, it has not been found equally ſucceſsful: it requires here to be continued for ſeveral days, or repeated as an evacuant, with the further aſſiſtance of rhubarb, cordial antiſeptics, and mild opiates or aſtringents. Where plentiful evacuation is neceſſary, or the offending matter lodged deep, and the operation can be borne without inconvenience, the ipecacoanha, as Dr. Pringle obſerves, is moſt advantageouſly given in ſmall quantities at a time, and repeated at proper intervals, till a vomiting or purging comes on.

*In the ſpaſmodic aſthma, Dr. Akenſide remarks, that where nothing contraindicates repeated vomiting, he knows no medicine ſo effectual as ipecacoanha. In violent paroxyſms, a ſcruple procures great and immediate relief. For habitual indiſpoſition, from three to five grains every morning, or from five to ten every other morning, may be given for a month or ſix weeks. It is equally uſeful where it does not vomit, as where it does. The relief ſeems owing to its general antiſpaſmodic or relaxing property, of which its emetic operation is probably a particular conſequence *(a)*.

*In the *Stockholm acts* 1770, are ſeveral caſes of uterine hæmorrhages cured by one third or half a grain, rubbed with ſugar, given every four hours or oftener. In one caſe, the hæmorrhage returned on diſcontinuing the medicine, and ceaſed on repeating it. Theſe ſmall doſes had good effects in catarrhal coughs, even in thoſe which attend conſumptions; and if not beneficial, are at leaſt not hurtful, in bloody coughs, in which vomiting has ſeveral times

(a) Med. Tranſact. i. 93.

been

been obſerved to come on, without any increaſe of the hæmorrhage. They may be uſeful in peripneumony and pleuriſy, in which cough is often the moſt troubleſome ſymptom, and in which Seneka root (which in increaſed doſes proves alſo emetic) has been ſo much recommended.

The emetic virtue of ipecacoanha reſides in its reſinous parts. By digeſting the root in freſh quantities of rectified ſpirit, and inſpiſſating the filtered tinctures, a reſinous extract is obtained, to the quantity of about three ounces from ſixteen, which, by itſelf, vomits ſtrongly, and with great irritation: the reſiduum yields to water nearly four ounces of a ſoft tenacious mucilage, which has ſcarcely any ſenſible operation. If only a part of the reſin be extracted, by ſlight digeſtion in a little highly rectified ſpirit, the remaining root proves more gentle, and rather purgative than emetic: in this ſtate it is recommended by ſome in dyſenteries accompanied with a conſiderable fever, where the root with its natural quantity of reſin might irritate too much; but as ſmall doſes of the root itſelf operate with all the eaſe and gentleneſs that can be wiſhed for, this precarious method of weakening it does not appear adviſable.

By boiling it in water, a part of the reſin is taken up with the mucilage; the extract amounting to about ſix ounces from ſixteen, and proving mildly emetic. The beſt menſtruum for extracting the entire virtue of the root appears to be a mixture of one part of pure ſpirit with two or rather three parts of water: after ſufficient digeſtion in this menſtruum, neither water nor ſpirit took up any thing conſiderable from the remainder. In the ſhops wine is employed: an ounce of the root

is

Vinum ipecacuanhæ
† *Ph. Lond.*
‡ *Ph. Ed.*

is macerated or digeſted in a pint† or fifteen ounces of mountain‡. Theſe tinctures, in doſes of from half an ounce or leſs to an ounce and upwards, prove mildly emetic.

IRIS.

IRIS: a perennial plant with long narrow ſword-like leaves, ſtanding edgewiſe to the ſtalk; and large naked flowers, divided deeply into ſix ſegments, of which, alternately, one is erect and another arched downwards, with three ſmaller productions in the middle, incloſing the ſtamina and piſtil: the roots are tuberous, irregular, and full of joints.

1. IRIS *vulgaris germanica ſive ſilveſtris C. B. Iris germanica Linn.* Flower-de-luce, common iris or orrice: with blue flowers, whoſe arched ſegments are bearded with a yellowiſh matter, ſtanding ſeveral on one ſtalk higher than the leaves. It is a native of the mountainous parts of Germany, common in our gardens, and flowers in June.

THE roots of this plant have, when freſh, a diſagreeable ſmell, and an acrid nauſeous taſte. They are a ſtrong irritating cathartic; in which intention, their expreſſed juice has been given in hydropic caſes, from one or two drams to three or four ounces, diluted largely with watery or vinous liquors, to prevent its inflaming the throat. The remarkable differences in the doſe, as directed by different practical writers, appear to have proceeded from hence; that ſome employed the juice in its recent turbid ſtate, loaded with the acrimonious cathartic matter of the root; others, ſuch as had been depurated

depurated by ſettling, and which had depoſited, along with the feculencies, a great ſhare of the active parts. By gently inſpiſſating the juice, it is rendered leſs violent in cathartic power, and leſs liable to irritate and inflame; but becomes at the ſame time too precarious in ſtrength to be depended on: by inſpiſſation to perfect dryneſs, its purgative virtue is almoſt, if not altogether, deſtroyed. The root itſelf loſes alſo, in drying, its offenſive ſmell, and its nauſeous acrimony, and along with theſe its cathartic quality: in this ſtate, it diſcovers a ſlight and not diſagreeable pungency and bitteriſhneſs, accompanied with a kind of aromatic flavour, nearly of the ſame kind with that of the following ſpecies, but weaker and leſs grateful.

The bluiſh expreſſed juice of the flowers changes on being inſpiſſated, eſpecially if a little lime-water is added, to a fine green; and in this form is directed, in foreign pharmacopœias; for tinging ſome of the unctuous compoſitions called odoriferous or apoplectic balſams.

2. Iris *Pharm. Lond. Iris florentina Pharm. Edinb. & Linn. Iris alba florentina C. B.* Florence orrice; ſuppoſed to be only a variety of the foregoing occaſioned by difference of climate; diſtinguiſhable from it in our gardens, by the flowers being white, and the leaves inclining more to bluiſh. The ſhops are ſupplied from Italy with dried roots ſuperiour to thoſe of our own growth; in oblong flattiſh pieces freed from the fibres and browniſh bark, externally of a whitiſh colour with browniſh ſpecks, internally inclining to yellowiſh, eaſily reducible

reducible into a farinaceous yellowiſh white powder.

This root, in its recent ſtate, does not ſeem to differ much from the preceding; being, like it, nauſeous, acrimonious, and purgative, though not quite in ſo great a degree; and loſing theſe qualities on being dried. The dry root, as met with in the ſhops, has an unctuous, bitteriſh, pungent taſte, not very ſtrong, but very durable in the mouth: and a light agreeable ſmell, approaching to that of violets. It is uſed in perfumes; in ſternutatory powders; for communicating a grateful flavour, ſomewhat like that of raſpberries, to wines and to ſpirits; and medicinally in diſorders of the breaſt, for attenuating viſcid phlegm, and promoting expectoration. Its ſmell and taſte are extracted both by water and rectified ſpirit, moſt perfectly by the latter. In diſtillation, it gives over with water the whole of its peculiar flavour, its bitterneſs and a ſlight acrimony remaining in the inſpiſſated extract: the diſtilled water ſmells very agreeably, but no eſſential oil is obtained though ſome pounds of the root be ſubjected to the operation at once. Rectified ſpirit brings over a part of its violet ſmell, but little or nothing of its warmth or taſte: the inſpiſſated extract is a pungent, bitteriſh, balſamic maſs, glowing in the mouth like pepper; its quantity is about one fifteenth of the weight of the root.

3. Iris *paluſtris Pharm. Edinb. Iris paluſtris lutea Ger. Gladiolus luteus. Acorus vulgaris Pharm. Auguſtan. Acorus adulterinus C. B. Pſeudoacorum Matth. Pſeudoris Dod. Butomon Cluſ. Iris Pſeud-Acorus Linn.* Yellow water-flag,

flag, baſtard acorus, ſedge: with reddiſh roots, yellow unbearded flowers ſtanding ſeveral on one ſtalk, and the middle ribs of the leaves prominent. It is common by the ſides of rivers and marſhes, and flowers in June.

THE roots of this ſpecies are, when freſh, rather more acrid, and more ſtrongly cathartic, than either of the preceding. The expreſſed juice, given to the quantity of eighty drops every hour or two, and occaſionally increaſed, has, in ſome inſtances, produced plentiful evacuations, after jalap, gamboge, and mercurials had failed *(a)*: but however ſucceſsful it may have ſometimes been as a draſtic purgative, it is accompanied, like the other iriſes, with a capital inconvenience; its ſtrength being ſo precarious, or ſo variable in different ſtates, that it is by no means fit for general uſe. The juice, both of this and of the other kinds of iris, has been employed alſo externally for clearing the ſkin of ſerpiginous eruptions; and ſometimes ſnuffed up the noſe as a ſtrong errhine: even for theſe purpoſes it is to be uſed with caution, being ſubject, by its great acrimony, to inflame or veſicate the parts.

The dry roots are much weaker and leſs agreeable than thoſe of either of the preceding ſpecies of iris. They have ſcarcely any ſmell; and when chewed in ſubſtance, diſcover very little taſte. An extract made from them by rectified ſpirit is likewiſe weaker and more nauſeous, though its quantity is leſs, amounting only to one twenty-fourth of the weight of the root: it has nothing of the flavour or aromatic warmth of thoſe of the other two, but an

(a) Edinburgh medical eſſays, vol. v. *art.* 8.

ungrateful auſtere bitteriſhneſs and a kind of ſaline pungency. It is the root in this dry ſtate that the writers on medicines mean, when they ſpeak of the yellow water-flag root as being aſtringent and ſtomachic: it does not, however, appear to have any great claim to theſe virtues, and among us is no otherwiſe made uſe of than as an ingredient in the officinal arum powder, in which it is ſaid to be employed only in deference to the original of Birckmann firſt publiſhed by Quercetanus.

*JUGLANS.

JUGLANS Pharm. Lond. Nux juglans C. B. Juglans regia Linn. WALNUT: a large tree commonly cultivated in this and moſt other countries of Europe for its fruit, which is a fleſhy drupe, becoming huſky when ripe, and incloſing a nut with an edible kernel. The unripe fruit (which is the part ſpecified in the London catalogue) has a ſharp acerb taſte, and when handled, tinges the ſkin with ruſt-coloured durable ſpots. Infuſed in water it imparts a bitter harſh taſte to the fluid, which becomes blackiſh on the addition of vitriol of iron. An extract prepared from it is ſubſaline, lightly acerb and ſtyptic, and ſufficiently grateful to the ſmell. This extract is accounted an excellent anthelmintic, given twice or thrice a day in the doſe of a tea ſpoonful to children. It proves purgative, and expels the worms with the ſtools. A ſyrup made with a ſtrong decoction of green walnuts and brown ſugar, is much uſed in ſome parts of England as a domeſtic aperient medicine. The outer covering and ſhell of the fruit have been joined with guaiacum and ſarſaparilla as ingredients for ſudorific

decoctions

decoctions in rheumatic and venereal cases. Green walnuts enter an antivenereal decoction, the formula of which is given in a Treatise on the Venereal Disease by Dr. Swediaur, edition second and third. This decoction is by some supposed to be the genuine LISBON *diet drink* which has acquired considerable reputation among the nostrums for this malady.

The culinary use of unripe walnuts as a pickle is well known.

JUJUBÆ.

JUJUBÆ Pharm. Paris. Jujubæ majores oblongæ C. B. Zizyphus Dod. Rhamnus Zizyphus Linn. JUJUBES: a half-dried fruit of the plum kind, about the size and shape of an olive: consisting of a pretty thick reddish yellow skin, a whitish fungous pulp, and a wrinkled stone pointed at both ends: the produce of a prickly tree, with three-ribbed leaves, and herbaceous or yellowish flowers, sometimes found wild, and commonly cultivated in the southern parts of Europe.

This fruit, when in perfection, has an agreeable sweet taste; and in those countries where it is common, makes an article of food in its recent state, and of medicine when half dried; decoctions of it being used, like other glutinous sweets, as incrassants, and demulcents in defluxions on the breast. Among us, it has long stood neglected, and is now become a stranger to the shops; the tree not producing fruit in this climate; and that, which we received from abroad, being commonly mouldy or carious.

ANOTHER fruit of the same kind, of a dark blackish hue, furnished with an ash-coloured

cup at the bottom, from which it eaſily parts, is ſometimes brought from the eaſtern countries, under the names of *ſebeſten*, *myxa*, or *myxaria*. It is produced by the *Cordia Myxa* of Linnæus. It is more glutinous than the jujube; to which it has been commonly joined in pectoral decoctions; and along with which it is now diſcarded by the colleges both of London and Edinburgh.

JUNCUS ODORATUS.

JUNCUS ODORATUS ſive aromaticus C. B. Schœnanthus, ſquinanthum, fœnum camelorum, & palea de mecha quibuſdam. Andropogon Schœnanthus Linn. SWEET RUSH or CAMEL'S HAY: a dried herb, of the graſs kind, brought from Turkey and Arabia, in bundles about a foot long; conſiſting of ſmooth ſtalks, in ſhape and colour ſomewhat reſembling barley ſtraws, full of a ſungous pith like thoſe of ruſhes; and leaves like thoſe of wheat ſurrounding the ſtalk with ſeveral coats: towards the tops of the ſtalks are ſometimes found ſhort woolly ſpikes of imperfect red flowers, ſet in double rows.

THE ſweet ruſh, when in perfection, has an agreeable ſmell, and a warm, bitteriſh, not unpleaſant taſte. Diſtilled with water, it yields a ſmall quantity of a yellowiſh, fragrant, and very pungent eſſential oil: the remaining decoction, thus diveſted of the aromatic matter of the plant, proves unpleaſantly roughiſh, bitteriſh, and ſomewhat acrid. A tincture made in rectified ſpirit, in colour greeniſh yellow, yields, on being inſpiſſated, a tolerably grateful, bitteriſh, aromatic extract. This plant, formerly employed as a warm ſtomachic and deobſtruent, appears

appears from the above experiments to be of no inconſiderable activity; but in this country, more common aromatic vegetables have now ſuperſeded its uſe. It has been kept in the ſhops only as an ingredient in the mithridate and theriaca; and the two colleges, having at laſt expunged thoſe compoſitions, have dropt the *juncus odoratus*.

JUNIPERUS.

JUNIPERUS: juniperus vulgaris fruticoſa C. B. Juniperus communis Linn. JUNIPER: an evergreen tree or buſh, clothed with ſlender narrow ſtiff ſharp leaves, like prickles, which ſtand generally three together: the flowers are a kind of ſmall ſcaly catkins growing on one plant; the fruit, round berries, growing on a different one, containing, each, three oblong irregular ſeeds. It is common on heaths in different parts of Europe; and is found, at all ſeaſons of the year, both with unripe green or red berries, and with ripe bluiſh black ones.

The BERRIES, *baccæ juniperi Pharm. Lond. & Edinb.* are brought chiefly from Holland and Italy: they ſhould be choſen freſh, not much ſhrivelled, and free from mouldineſs, which they are very ſubject to contract in keeping. They have a moderately ſtrong not diſagreeable ſmell, and a warm pungent ſweetiſh taſte, which if they are long chewed or previouſly well bruiſed, is followed by a conſiderable bitterneſs. The ſweetneſs appears to reſide in the juice or ſoft pulpy part of the berry: the bitterneſs, in the ſeeds; and the aromatic flavour, in oily veſicles, ſpread throughout the ſubſtance both of the pulp and of the ſeeds, and diſtinguiſhable even by the eye. The freſh berries yield, on expreſſion,

a rich, ſweet, honey-like aromatic juice: if previouſly powdered, ſo as to thoroughly break the ſeeds, which is not done without difficulty, the juice proves tart and bitter. The ſame differences are obſervable alſo in tinctures and infuſions made from the dry berries, according as the berry is taken entire or thoroughly bruiſed.

Ol. e baccis juniperi *Ph. Lond. & Ed.*

They give out nearly all their virtue both to water and rectified ſpirit, and tinge the former of a browniſh yellow, the latter of a bright orange colour. Diſtilled with water, they yield a yellowiſh eſſential oil, very ſubtile and pungent, in ſmell greatly reſembling the berries, in quantity (if they have been ſufficiently bruiſed) about one ounce from forty: the decoction, inſpiſſated to the conſiſtence of a rob or extract, has a pleaſant, balſamic, ſweet taſte, with a greater or leſs degree of bitteriſhneſs. A part of the flavour of the berries ariſes alſo in diſtillation with rectified ſpirit: the inſpiſſated tincture conſiſts of two diſtinct ſubſtances; one oily and ſweet: the other tenacious, reſinous, and aromatic.

Theſe berries are uſeful carminatives, detergents, and diuretics. The diſtilled oil is a very ſtimulating diuretic, approaching in quality to that of turpentine, like which, it impregnates the urine with a violet-ſmell: the ſpirituous extract gives the ſame kind of ſmell; as does likewiſe the berry in ſubſtance, in a lower degree; but the watery extract or rob, as being diveſted of the oil, has no ſuch effect. This laſt may be uſed with advantage in caſes where the more ſtimulating preparations would be improper; as in catarrhs, debilities of the ſtomach and inteſtines, and difficulties of the urinary excretions, in perſons of an advanced age. Among the aromatics that have been tried in compoſition with

with juniper berries, ſweet fennel ſeeds and caraway ſeeds ſeem the beſt adapted to improve their flavour: a cordial water is prepared in the ſhops by drawing off a gallon of proof ſpirit from a pound of the berries and an ounce and a half of each of the ſeeds. The water is ſtrongly impregnated with the volatile virtue of the berry; to which the more fixt ones may in many caſes be uſefully ſuperadded, by mixing with it a proper quantity of the rob.

Spiritus juniperi comp. *Ph. Lond.*

The WOOD, *lignum juniperinum, cedrinum lignum Pharm. Pariſ.* has been recommended as a ſudorific, and by ſome accounted ſimilar to guaiacum or ſaſſafras, to either of which it is greatly inferiour. It has a weak not unpleaſant ſmell, and very little taſte: decoctions and extracts, made from it with water, are diſagreeably bitteriſh, ſubaſtringent, and balſamic: the ſpirituous tinctures are weaker than the watery, and yield, on being inſpiſſated, an almoſt inſipid reſin. The quantity of watery extract, according to Cartheuſer's experiments, is about one twelfth the weight of the wood; of ſpirituous extract, one eighth.

IN the warmer climates, particularly on the coaſts of Africa, there exudes, from a larger ſpecies of juniper, a reſinous juice, which concretes into ſemipellucid pale yellowiſh tears or glebes, reſembling maſtich, but larger; the *ſandaracha* of the Arabians, and *gummi juniperinum* of the ſhops called by ſome, from the uſe to which it has been principally applied, *vernix*. This reſin has a light agreeable ſmell, and no conſiderable taſte: it diſſolves in rectified ſpirit, and in oils both expreſſed and diſtilled, but gives out little or nothing to watery liquors, and thus diſcovers that it is nearly a pure reſin. It

is ſuppoſed to be ſimilar in quality, as in appearance, to maſtich; and has been ſometimes given internally, againſt hemorrhagies, old fluxes, and ulcerations; but principally employed externally in corroborant, nervine, traumatic applications. Among us, it is ſcarcely ever made uſe of for any medicinal purpoſes; other reſinous ſubſtances, more common in the ſhops, being apparently ſuperiour to it.

KALI.

KALI majus cochleato ſemine C. B. Salſola quibuſdam. Salſola Soda Linn. SNAIL SEEDED GLASSWORT or SALTWORT: a plant with ſpreading, reddiſh, pretty thick branches; oblong, narrow, pointed, fleſhy leaves like thoſe of the houſeleeks; and imperfect flowers in the boſoms of the leaves, followed each by one ſeed ſpirally curled and incloſed in the cup. It is annual, and grows wild on the ſea coaſts in the ſouthern parts of Europe, particularly of the Mediterranean.

THIS herb is very juicy, in taſte bitteriſh and remarkably ſaline. The expreſſed juice, and infuſions or decoctions of the leaves, are ſaid to be powerfully aperient and diuretic, and in this intention have by ſome been greatly recommended in hydropic caſes: half a dram of the juice is reckoned a ſufficient doſe. But the kali is principally regarded, on account of its yielding copiouſly, when burnt, the fixt alkaline ſalt called *ſoda* or *ſoude:* an impure ſoda is prepared from it about Montpelier, where the plant is ſaid to be cultivated for this uſe in the ſalt marſhes; and a purer kind at Alicant in Spain the *barilla Pharm. Lond.* from a ſomewhat

a ſomewhat different ſpecies of kali *(a)*. The ſalt called *kelp*, prepared among ourſelves from different marine plants, contains an alkali of the ſame kind, but more impure.

The ſoda is much milder in taſte than the common vegetable alkalies, and is in ſeveral other reſpects alſo very conſiderably different from them, being of the ſame nature with the mineral alkali or baſis of ſea ſalt (ſee *Natron*). It promiſes to be an uſeful article of the materia medica, and has for ſome time paſt been received in practice in this country, as it has long been among the French, both by itſelf, and combined with tartar into the neutral ſalt called *ſal rupellenſe*. *The Edinburgh college have received a purified ſalt of this kind, under the title of *ſal alcalinus fixus foſſilis purificatus*; and the London, under that of *natron præparatum*.

KERMES.

GRANUM TINCTORIUM & coccus baphica quibuſdam. KERMES: round reddiſh-brown grains, about the ſize of peas: found in Spain, Italy, and the ſouthern parts of France, adhering to the branches of the ſcarlet oak. Theſe grains appear, when freſh, full of minute reddiſh ova or animalcules, of which they are the nidus, and which in long keeping change to a browniſh red powdery ſubſtance. They are cured by ſprinkling with vinegar before exſiccation: this prevents the excluſion of the ova, and kills ſuch of the animals as are already hatched; which would otherwiſe become

(a) Kali hiſpanicum ſupinum annuum ſedi foliis brevibus, *Mem. de l'acad. des ſcienc. de Paris, pour l'ann.* 1717. & *Pharm. Pariſ. p.* lxiv. *Salſola ſativa Linn.*

winged

winged inſects, and leave the grain an empty huſk.

Fresh kermes yield upon expreſſion a red juice, of a light pleaſant ſmell, and a bitteriſh, ſubaſtringent, ſomewhat pungent taſte: this juice, or a ſyrup made from it, are brought from the ſouth of France, and ſometimes made uſe of as mild reſtringents and corroborants.

Confectio alkermes.

An elegant cordial confection, for theſe intentions, is prepared in the ſhops, by diſſolving, in the heat of a water bath, ſix ounces of fine ſugar in ſix ounces by meaſure of damaſk roſe water, then adding three pounds of the juice of kermes warmed and ſtrained, and after the whole has grown cold, mixing in half a ſcruple of oil of cinnamon: this confection is taken from a ſcruple to a dram or more; either by itſelf, or in juleps, with which it mingles uniformly without injuring their tranſparency. The dried grains, if they have not been too long kept, give out, both to water, and to rectified ſpirit, the ſame deep red colour, and nearly the ſame kind of ſmell and taſte, with thoſe of the expreſſed juice. The watery tinctures loſe nearly all their ſmell in evaporation: the ſpirituous retain nearly the whole of their ſmell as well as of their taſte. The inſpiſſated extracts are conſiderably bitter, aſtringent, and of a kind of mild balſamic pungency: the ſpirituous is ſtronger and in ſomewhat ſmaller quantity than the watery, but the difference in ſtrength is more conſiderable than that of the quantity, ſpirit ſeeming to extract the active matter more completely than water.

KINO.

KINO.

GUMMI rubrum aſtringens gambienſe D. Fothergill in *med. obſ. Lond.* vol. i. 1757. *Kino, Pharm. Lond. & Edinb.* Red aſtringent gum from Gambia; ſuppoſed to exude from inciſions made in the trunks of certain trees, called *pau de ſangue*, growing in the inland parts of Africa.

It is very friable, ſo as to be crumbled in pieces by the hands; of an opake dark reddiſh or almoſt black colour in the maſs, and when reduced to powder, of a deep brick red: ſmall particles of it, viewed with a magnifying glaſs, appear of a ſemitranſparent red like bits of garnet. In chewing, it firſt crumbles, then ſticks together a little, and in a ſhort time ſeems wholly to diſſolve, impreſſing a very conſiderable aſtringency accompanied with a ſlight ſweetiſhneſs. It has no ſmell.

To oils it gives little or no tincture. On a red-hot iron, it glows for a long time like a bit of burning charcoal, without ſhewing any diſpoſition to melt: it yields, during a little while, a ſlight dull flame hovering about the ſurface, and leaves at length a large proportion of greyiſh aſhes.

Both rectified ſpirit and water diſſolve, each, about two thirds of it, the ſpirit ſomewhat more than the water. Both ſolutions, when made with the ſame quantities of the two menſtrua, as twenty or thirty times the weight of the powdered gum, appear of the ſame deep bright red colour, the ſpirituous rather deepeſt: with ſolution of chalybeate vitriol, they both produce inky mixtures, from which the black matter ſpeedily concretes and ſettles to the bottom, leaving

leaving the liquors colourleſs *(a)*. The watery ſolution ſuffers no apparent change from the addition of alkalies fixt or volatile; but acids render it turbid, and occaſion a copious precipitation.

The part, which water leaves undiſſolved, ſeems as dark-coloured as the gum at firſt: it gives the ſame deep red tincture to ſpirit, and this tincture ſtrikes the ſame black with ſolution of vitriol. The part which ſpirit leaves undiſſolved is much paler than the original gum, gives no tincture to water, and produces no change with the vitriolic ſolution.

It appears therefore that both the colouring and aſtringent matter are more completely taken up by ſpirit than by water; though water extracts readily enough a great ſhare of both.

Only a little quantity of this drug has hitherto been brought over. Dr. Fothergill, the firſt perſon, as far as I can find, who gave notice of it to the public, and who favoured me with the ſpecimens on which the above experiments were made, informs us, that he had the firſt intimation of it from a phyſician, who had met with good effects from it in obſtinate chronical diarrhœæ; and that a parcel was afterwards ſhewn to him, which had been received from a Guinea ſhip, and taken for a

(a) The black matter in theſe kinds of mixtures appears to conſiſt of the iron of the vitriol, diſengaged from its acid ſolvent, and combined with the vegetable aſtringent ſubſtance; the acid ſerving only as a neceſſary intermedium for procuring this union. The above black precipitates, after repeated ablutions with water, retained their blackneſs; and the clear liquors from which they had ſettled, being examined with alkaline ſalt on the principles to be mentioned hereafter under the article *ſales alkalini*, ſeemed to contain as much acid as the quantity of vitriol employed in them.

fine

fine kind of dragons blood, which it pretty much reſembles in appearance, though in quality eſſentially different. He obſerves, that from the trials which have been made, and from its ſenſible qualities, it promiſes to be an article worth inquiring after, and to become in time a valuable addition to the materia medica. In diſorders from laxity and acrimony, it may, doubtleſs, be of great advantage; nor do I recollect any other drug, that is ſo much of a gummy nature, and at the ſame time ſo aſtringent. Terra japonica comes the neareſt to it, but is manifeſtly leſs aſtringent. The terra japonica differs likewiſe, in its watery ſolutions ſuffering no conſiderable ſeparation of their parts from the addition of acids; and in the black matter, which they produce with vitriol, being little diſpoſed to concrete and precipitate. Whether the cauſe, on which theſe kinds of diverſities depend, be ſufficient to influence alſo their medicinal powers, our knowledge, both in the chemical compoſition of bodies, and in the operation of medicines, is as yet too imperfect to permit us to judge. *The London and Edinburgh colleges have now received this gum as an officinal, and the latter have directed a tincture, in which two ounces of it are diſſolved in a pound and a half of proof ſpirit.

Tinctura e Kino *Ph. Ed.*

LABDANUM.

LADANUM Pharm. Lond. LABDANUM: a reſinous juice, exuding upon the leaves of a ſmall ſhrub, *ciſtus ladanifera cretica flore purpureo Tourn. Ciſtus creticus Linn.* which grows plentifully in Candy and ſome of the other iſlands of the Archipelago, and bears the winters of our own climate. The juice is ſaid to be collected,

lected, by lightly brushing the shrub, in the summer heats, with a kind of rake having several straps or thongs of leather fixed to it instead of teeth *(a)*: the unctuous juice adheres to the thongs, and is afterwards scraped off with knives. The shrub is said to be very plentiful also in Spain *(b)*, but it does not appear that any labdanum is brought from thence.

Two sorts of labdanum are met with in the shops. The best, which is very rare, is in dark-coloured black masses, of the consistence of a soft plaster, growing still softer on being handled: the other is in long rolls coiled up, much harder than the preceding, and not so dark. The first has commonly a small, and the last a very large admixture of fine sand, which, in the labdanum examined by the French academy, amounted to three fourths of the mass. It is scarcely indeed to be collected pure, independently of designed abuses; the dust, blown on the plant by winds from the loose sands among which it grows, being retained by the tenacious juice.

Labdanum has been sometimes exhibited as a resinous corroborant and restringent, but principally employed in external applications and perfumes: the soft kind makes an useful ingredient in the cephalic and stomachic plasters of the shops. This sort has an agreeable smell, and a lightly pungent bitterish taste: the hard is much weaker, and the common means of purifying these kinds of substances, though they

(a) Belon, *(Bellonius) observations des choses memorables trouvées en Grece, &c. l.* i. *c.* vii.

(b) Clusius, *Rariorum stirpium per Hispanias observatarum historia, l.* i. *c.* v.

separate

ſeparate the ſandy matter mixed with it, render it weaker ſtill. Rectified ſpirit of wine diſſolves nearly the whole of the pure labdanum into a gold-coloured liquor: on inſpiſſating the filtered ſolution, the finer part of the labdanum riſes with the ſpirit, and the remaining reſin proves both weaker and leſs agreeable than the juice at firſt. On infuſing the labdanum in water, it impregnates the liquor conſiderably with its ſmell and taſte: in diſtillation with water, there comes over a fragrant eſſential oil; and there remains in the ſtill a brittle almoſt inſipid reſin, with a pale coloured liquor, which, inſpiſſated, yields a weakly bitteriſh extract. The ſpecific flavour of this juice ſeems to be ſooner diſſipated by heat than that of almoſt any of the other officinal reſins or gummy reſins.

L A C.

LAC; lac aſininum, caprinum, muliebre, ovillum, vaccinum. Milk: aſſes, goats, human, ſheeps, and cows milk: a fluid prepared and ſecreted in the bodies of animals, but not completely elaborated into an animal nature. On a chemical analyſis, it yields the ſame general principles with ſubſtances of the vegetable kingdom.

Milk is a mild nutritious balſamic fluid; when taken freely, an excellent obtunder of acrid and deleterious ſubſtances, and of overdoſes of the ſtronger cathartics and emetics; one of the beſt reſtoratives in emaciated habits; a palliative, whilſt its uſe is continued for the only aliment, in gouty caſes not inveterate, and in ſome rheumatic pains; the medicine principally depended on in hectics and conſumptions; prejudicial

prejudicial in acute diſeaſes, bilious fluxes and dyſenteries, ſwellings of the præcordia, and obſtructions of the abdominal viſcera.

It ſometimes happens, that when the body ſtands moſt in need of this medicinal nutriment, the inteſtines are too ſlippery to retain it. In ſuch caſes it may be advantageouſly boiled with gentle aſtringents, as granate peel, balauſtines, red roſes; about an equal quantity of water being added, by a little at a time as the milk boils up, ſo as that all the water may be waſted in the boiling *(a)*.

It may be preſumed that milk thickens in a ſound ſtomach, before its digeſtion, nearly in the ſame manner as it is thickened by the runnet or infuſion of the ſtomach of a calf; and that, where the gaſtric juices are too inert to produce this change, or ſo acid as to produce it in too great a degree and to ſeparate a firm curd from the ſerous part; the milk will be difficult of digeſtion. Debilities of the ſtomach are endeavoured to be corrected by the medication above-mentioned, or by the interpoſition of proper ſtomachics; acidities by the abſorbent earths. The abſorbent earths, however, are in this intention commonly inſufficient, unleſs aſſiſted by ſtomachics; for as they abſorb only the acid already generated, and have no power of remedying the weakneſs or indiſpoſition which tends to produce more, they afford only a temporary and palliative relief: and indeed it may be queſtioned, whether they are capable of ſo far deſtroying the force, even of the acid they are mixed with, as to prevent its curdling milk in the ſtomach.

(a) Mead, *monita & præcepta medica*, *p.* 49.

Milk

Milk is curdled by all acids; by moſt, perhaps by all, of the combinations of acids with earthy and metallic bodies; by alkaline ſalts both fixt and volatile; by ſome vegetables that have no acidity or alkaline quality, as muſtard ſeed; and by ſtrong vinous ſpirits. The concentrated acids produce a ſtrong curd immediately on mixture: moſt of the other ſubſtances ſcarcely have their full effect without a boiling heat. The coagulum made by acids falls to the bottom of the ſerum: that made with alkalies ſwims on the ſurface, forming, eſpecially if the alkali is of the volatile kind, a thick coriaceous ſkin. The ſerum, with alkalies, proves of a greeniſh hue: that made with the other ſubſtances is nearly of the ſame appearance with the whey which ſeparates ſpontaneouſly.

The perfect neutral ſalts, or thoſe compounded of an acid and an alkali, produce no coagulation, either with or without heat: ſome of them, particularly nitre and ſal ammoniac, make the milk leſs coagulable, and, if added to the boiling mixture when already curdled by vegetable acids, render nearly the whole fluid again *(a)*. Sugar retards the ſpontaneous coagulation, and impedes likewiſe the ſeparation of the cream from milk, and of the butyraceous part from cream. Lime-water and animal gall rediſſolve the coagula.

Milk, diſtilled with a gentle warmth, gives over a colourleſs and taſteleſs liquor, which ſeems to be mere water, but is found to differ from the ſimple element in growing ſour upon keeping. The reſiduum is a grumous, unctu-

(a) Willis, *Pharmaceutice rationalis, pars* i. *ſect.* iv. *cap.* i. § 8.

ous, yellowiſh or browniſh maſs; which, on being boiled in water, partially diſſolves. This ſolution contains the ſweet ſubſtance of the milk, freed from the groſſer unctuous caſeous matter; and proves an elegant whey, more agreeable in taſte, and which keeps better, than thoſe prepared in the common manner. Theſe ſorts of liquors are very uſeful, cooling, diluent, aperients and detergents; in hypochondriacal complaints, impurities of the humours, acute diſeaſes, &c. They promote the natural excretions in general, and remarkably increaſe the action of the purgative ſweets, caſia and manna. The ſaline matter of theſe liquors may be obtained in a pure ſolid cryſtalline ſtate, by clarifying the whey with whites of eggs, and, after due evaporation, ſetting it to ſhoot, in the ſame manner as other ſaline ſolutions.

Saccharum lactis *Ph. Pariſ.*

Thus milk is reſolved into a watery fluid; a groſs ſubſtance indiſſoluble in water, which appears to contain the directly nutrimental part; and a ſweet aperient ſalt. The milks of different animals differ remarkably in the proportions of theſe ingredients, and in the quality of the ſalt.

Breaſt milk and aſſes milk are very nearly alike: twelve ounces leave on evaporation, according to Hoffman's experiments, eight drams of ſolid matter, of which boiling water diſſolves ſix drams: the ſolution, inſpiſſated or cryſtallized, yields a ſalt of a rich honey-like or ſaccharine ſweetneſs. The ſame quantity of cows milk leaves thirteen drams of ſolid matter, from which water extracts only about a dram and a half: the ſalt obtained from this ſolution is much leſs ſweet, when purified is almoſt inſipid, diſſolves very difficultly, and ſeems to have little claim to the pectoral and antiphthiſical virtues

tues vulgarly aſcribed to it. All the other milks that have been examined are of an intermediate nature between the two firſt and the laſt: goats milk approaches more to that of the aſs than ſheeps milk does, though both of them come nearer to that of the cow than of the aſs.

There are conſiderable differences in the milk of one and the ſame animal according to its different aliment. Dioſcorides relates, that the milk of goats, which fed on the ſcammony plant and ſpurges, proved cathartic; and inſtances are given, in the *Acta Hafnienſia*, of bitter milk from the animal having eaten wormwood. It is a common obſervation, that cathartics, ſpirituous liquors, &c. taken by a nurſe, affect the child; that the milk of animals, feeding on green herbs, is more dilute than when they are fed on dry ones; and that many of the common plants, which are eaten by cattle, give a particular taſte to their milk. Hoffman is of opinion, that, on this principle, milk may be uſefully impregnated with the virtues of different medicinal ſubſtances.

LACCA.

LAC, STICK-LAC, improperly called GUM-LAC: a concrete brittle ſubſtance, of a dark red colour; brought from the Eaſt Indies incruſtated on pieces of ſticks; internally divided into ſeveral cells; ſaid to be the reſinous juice of certain trees, collected by winged red inſects of the ant kind, impregnated with the tinging matter of the inſects, and by them depoſited either on the branches of the trees, or on ſticks faſtened in the earth for that purpoſe. In the

cells are often obſerved ſmall red bodies, which appear to be the young inſects *(a)*.

* A curious account by Mr. Kerr of the inſect producing this gum, is contained in the *Philoſ. Tranſ.* vol. lxxi. part ii. From this it appears, that theſe inſects are inhabitants of four trees; the *Ficus religioſa Linn.* the *Ficus Indica Linn.* the *Plaſo Hort. Malabar.* and the *Rhamnus Jujuba Linn.* The lac is however rarely found upon this laſt, and of an inferiour quality. The two ſpecies of *Ficus* yield a milky juice when wounded, which inſtantly coagulates into a viſcid ſubſtance. The *Plaſo* tree by inciſion gives out a red gum very ſimilar to the lac. Hence the inſect ſeems to have little trouble in animalizing the juices of theſe trees ſo as to make its cell, which is the ſtick-lac. It is found in very great quantities on the uncultivated mountains on both ſides the Ganges; and is of great uſe to the natives in various works of art, as varniſh, painting, dying, &c.

The tinging red animal matter of the ſtick-lac diſſolves both in water and in rectified ſpirit, and appears to be of the ſame general nature with that of cochineal; like which it is made dull by alkalies, and brighter by acids, and turned to a ſcarlet by ſolution of tin. If the lac be broken in ſmall pieces, or grains, and infuſed in warm water, till it ceaſes to give any tincture to the liquor; the remainder appears of a tranſparent yellowiſh or browniſh colour, and, on raiſing the heat ſo as to make the water boil, melts and riſes to the ſurface. The grains, or the plates formed from them by liquefaction,

Seed lac *of the ſhops.*

Shell lac *of the ſhops.*

(a) See the *Memoires de l'acad. roy. des ſciences de Paris, pour l'ann.* 1714.

thus

thus robbed of great part of the animal tincture, ſeem to be of an intermediate nature between that of wax and reſins, or to partake of the nature of both: they crumble on chewing, and do not ſoften or ſtick together again: laid on a red-hot iron, they inſtantly catch fire, and quickly burn off, with a ſtrong and not diſagreeable ſmell: diſtilled, they yield, like wax, an acid ſpirit and a butyraceous oil: alkaline lixivia, and volatile alkaline ſpirits, diſſolve them into a purpliſh liquor: they diſſolve alſo, by the aſſiſtance of heat, in rectified ſpirit of wine, and communicate to it a yellowiſh or browniſh red colour, an agreeable ſmell, and a bitteriſh, ſubaſtringent, not unpleaſant taſte. The lac in ſubſtance, whether entire, or freed from ſo much of its colouring matter as boiling water is capable of extracting, has no manifeſt taſte or ſmell.

A ſpirituous tincture of ſtick-lac has been ſometimes given as a mild reſtringent and corroborant in female weakneſſes, and in rheumatic and ſcorbutic diſorders. But the principal medicinal uſe of this concrete is as a topical corroborant and antiſeptic, in laxities and ſcorbutic bleedings and exulcerations of the gums: ſome employ for this purpoſe a tincture of the lac in alum water; others, a tincture made in vinous ſpirits impregnated with the pungent antiſcorbutics.

LACTUCA.

LETTUCE: a plant with ſlender but firm ſtalks, which yield, as do the leaves, a milky juice on being wounded: the flower conſiſts of a number of flat floſculi ſet in a ſmall ſcaly cup, followed by ſhort flat ſeeds, which are pointed at both ends and winged with down.

1. LACTUCA *ſativa C. B. & Linn.* Garden lettuce: with oblong, broad, rounded, uncut leaves; and numerous flowers ſtanding on long pedicles in the form of an umbel. It is annual, and raiſed at different times of the year in culinary gardens.

THE young leaves of the ſeveral ſpecies or varieties of garden lettuce are emollient, cooling, in ſome ſmall degree laxative and aperient, eaſy of digeſtion, but of little nouriſhment; ſalubrious in hot, bilious, indiſpoſitions; leſs proper in cold phlegmatic temperaments. In ſome caſes, they tend to procure ſleep; not as being poſſeſſed of any ſtrictly hypnotic power; but by virtue of their refrigerating and demulcent quality. When the plant is grown up, it proves conſiderably bitter, though leſs ſo than moſt of the others of the lacteſcent kind, to which it is ſimilar in its general virtues.

The ſeeds, which in the common lettuce are of a grey or aſh colour, in the cabbage lettuce black, unite with water, by trituration, into an emulſion or milky liquor, which has nothing of the aperient bitterneſs of the milky juice of the leaves, and is nearly ſimilar to the emulſions made with almonds. The lettuce emulſions have been ſuppoſed to be more refrigerant than thoſe of the almond, and hence have ſometimes been preferred in heat of urine and other diſorders from acrimony or irritation.

2. LACTUCA SILVESTRIS *Medicorum. Lactuca ſilveſtris & Scariola Pharm. Pariſ. Lactuca ſilveſtris coſta ſpinoſa C. B. Lactuca Scariola Linn.* Wild lettuce: with the leaves cut almoſt to the rib into indented triangular ſegments; and the ſtalks and the ribs prickly. It is biennial,

biennial, grows wild in hedges, and flowers in June.

This ſpecies is conſiderably bitterer than the garden lettuces, and more aperient and laxative. It is nearly ſimilar, in virtue as in taſte, to endive unblanched.

3. LACTUCA GRAVEOLENS: *lactuca ſilveſtris odore viroſo C. B. Lactuca viroſa Linn.* Strong ſcented lettuce, by ſome erroneouſly ſuppoſed to be the wild lettuce of medical writers: with the lower leaves entire, the upper jagged, the ſtalks and leaves prickly. It is biennial, found in hedges and by the ſides of ditches, and flowers in June.

This ſpecies differs greatly in quality from the two preceding, though reckoned by botaniſts to be only a variety of the ſecond. It ſmells ſtrongly of opium, and appears to partake, in no ſmall degree, of the virtues *(a)* of that narcotic drug. The opiate power of the lettuce, like that of the poppy-heads, reſides in its milky juice, but whether the milk of the lettuce is of equal ſafety, or its virtue preciſely of the ſame kind, with that of the poppy, is not known.

* Dr. Collin of Vienna has written a tract recommending the uſe of this plant in the cure of dropſies. The preparation he employs, is an extract from the expreſſed juice, firſt ſufficiently clarified, and evaporated by a very gentle heat. He begins with ſmall doſes; but in dropſies of long ſtanding, originating from viſceral obſtructions, he riſes to the quantity of from one to three drams in twenty-four hours. He has conſtantly found it a mild re-

(a) Ray, *Hiſtoria plantarum*, i. 222. Boerhaave, *Hiſt. hort. Lugd. Bat. p.* 127.

medy, agreeing perfectly with the ſtomach. It uſually kept the body open, but without exciting a purging. It ſeldom failed of proving powerfully diuretic, and at the ſame time mildly diaphoretic. The patient's thirſt is ſaid to have been totally extinguiſhed by its uſe; but at the ſame time we are told that they were allowed to drink freely of diluting liquors during the courſe. Dr. Collin aſſerts, that out of twenty-four dropſical caſes, all but one were cured by the uſe of this medicine; a degree of ſucceſs that certainly entitles it to the further notice of the faculty.

LAMIUM.

LAMIUM ALBUM Linn. Lamium album non fœtens folio oblongo C. B. Galeopſis & archangelica, & urtica mortua ſive alba quibuſdam. WHITE ARCHANGEL or DEAD NETTLE: a plant with ſquare ſtalks; oblong indented acuminated leaves, like thoſe of the ſtinging nettle, ſet in pairs at the joints; and cluſters, in the boſoms of the leaves, of white labiated flowers, whoſe upper lip is entire, arched, and hairy, the lower lip cloven. It is perennial, common in hedges and about the borders of fields, and found in flower from April to near the end of ſummer.

INFUSIONS of this plant, drank as tea, are ſaid to be beneficial in uterine hemorrhagies and the fluor albus: the flowers are ſuppoſed to be more efficacious than the leaves, and hence thoſe only are directed by the college of London. The ſenſible qualities, either of the one or the other, afford little foundation to expect from them any conſiderable virtues. The flowers have only a ſlight mucilaginous ſweetiſhneſs, without any remarkable ſmell or flavour: the

the leaves have a weak not unpleaſant ſmell, and a ſmall degree of roughneſs, which may entitle them to a place among the milder corroborants.

LAMPSANA.

LAMPSANA, Lapſana, Napium, Papillaris herba. Soncho affinis lampſana domeſtica C. B. Lapſana communis Linn. Dock cresses, Nipplewort: a roughiſh plant; bearing ſmall yellow floſculous flowers, ſet in form of an umbel on the top of the ſtalk, followed by little crooked naked ſeeds: the lower leaves are deeply cut, towards the pedicle, into generally two or four oppoſite ſections; the upper are oblong, narrow, undivided, and have no pedicles. It is annual, grows wild by road ſides, and flowers greateſt part of the ſummer.

This is one of the bitter lacteſcent plants, nearly ſimilar in virtue to dandelion, endive, cichory, and the others of that claſs. It has been employed chiefly for external purpoſes, againſt wounds and ulcerations, particularly of the nipples, whence its names *nipplewort* and *papillaris*.

LAPATHUM.

DOCK: a perennial plant bearing numerous imperfect flowers ſet in double cups: the outermoſt cup conſiſts of three ſmall green leaves; the inner of three larger reddiſh ones, which become a covering to a gloſſy triangular ſeed.

1. Oxylapathum. *Lapathum acutum folio plano C. B. Rumex acutus Linn.* Sharp-pointed wild dock: with long acuminated leaves, not curled

curled about the edges, growing gradually narrower from the bottom to the point; and the ſeed-covers indented and marked with little tubercles. The roots are of a browniſh colour on the outſide, and of a yellowiſh within, which grows deeper in drying.

The roots of the ſharp-pointed dock have a bitteriſh aſtringent taſte; and no remarkable ſmell: the roots of the other common wild docks are nearly of the ſame quality, equally diſcover their aſtringent matter both to the taſte and by ſtriking an inky blackneſs with ſolution of chalybeate vitriol, and have been often ſubſtituted in our markets to thoſe of the ſharp-pointed kind; which laſt are generally, and, ſo far as can be judged from their taſte, juſtly, accounted the moſt efficacious. They are ſuppoſed to have an aperient and laxative, as well as an aſtringent and corroborating virtue; approaching in this reſpect to rhubarb, but differing widely in degree, their ſtypticity being greater, and their purgative quality, if really they have any purgative quality at all, far leſs. They ſtand recommended in habitual coſtiveneſs, obſtructions of the viſcera, ſcorbutic and cutaneous maladies: in which laſt intention, fomentations, cataplaſms, or unguents of the roots, have been commonly joined to their internal uſe: in many caſes, the external application alone is ſaid to be ſufficient. Their active matter is taken up both by water and rectified ſpirit, and, on inſpiſſating the tinctures, remains in the extracts; both the watery and ſpirituous extracts are conſiderably bitter and very auſtere. A decoction of half an ounce or an ounce of the freſh roots, or of a dram or two

of

of the dry roots, is commonly directed for a dose.

2. Hydrolapathum *sive Herba britannica Pharm. Edinb. Lapathum aquaticum folio cubitali C. B. Rumex aquaticus Linn.* Great wild water-dock: with very large leaves, two or three feet long; the seed-covers not indented. The roots are externally blackish, internally white with a faint reddish tinge, which, in drying, changes in some parts to a yellowish: the internal part of the fresh root, exposed to the air, or of the dry root moistened, soon changes superficially to a deep yellow or brown.

The roots of the water-dock strike a black colour with solution of chalybeate vitriol, like those of the preceding species, but have a much stronger and more acerb taste; which is diffused equally, so far as can be judged, through the whole substance of the root. They give out their active matter both to water and rectified spirit, and tinge both menstrua of a pale yellowish or reddish brown colour, though in chewing they render the saliva only milky.

The *herba britannica* of the ancients, celebrated as an antiscorbutic, and of which the knowledge was long lost, was proved by Muntingius, towards the end of last century, to be no other than this great water-dock. Muntingius endeavours to prove also, that its name *britannica* was not derived from that of our island, but from Teutonic words expressing its power of fastening loose teeth, or of curing the disease which makes them loose. Later experience has shewn, that it is a medicine of very considerable efficacy, both externally in lotions against putrid spungy gums and ulcerations,

rations, and as an internal antiſcorbutic: Boerhaave aſſures us, that in theſe caſes he has known many inſtances of its happy effects. It is ſuppoſed to be of ſervice alſo in cutaneous defedations different from the true ſcurvy, in rheumatic pains, and in chronical diſorders proceeding from obſtructions of the viſcera. It has been chiefly uſed in medicated wines and ſmall ales, with the addition generally of ſome ſpicy materials, and ſometimes of other antiſcorbutic plants, as ſcurvygraſs, buckbean, horſe-radiſh, &c.

3. RHABARBARUM MONACHORUM *Pharm. Pariſ. Lapathum hortenſe latifolium C. B. Hippolapathum; Patientia. Rumex Patientia Linn.* Monks rhubarb, garden patience: with large, broad, acuminated leaves; reddiſh, branched ſtalks; the leaves that cover the ſeeds unindented, and a tubercle on one of them: the root is of a yellow colour, with red veins, approaching in appearance to rhubarb.

THIS root is ſuppoſed to poſſeſs the virtues of rhubarb, in an inferiour degree. It is obviouſly more aſtringent than rhubarb: but comes very far ſhort of it in purgative virtue, though given, as uſually directed, in double its doſe; nauſeating the ſtomach, without producing any conſiderable evacuation. It communicates a deep yellow tincture both to water and ſpirit.

LAVENDULA.

LAVENDER: a ſhrubby plant, with its leaves ſet in pairs, the ſtalks ſquare when young, and round when grown woody; producing, on the

the tops of the branches, naked ſpikes of blue, ſometimes white, labiated flowers, of which the upper lip is erect and cloven, the lower divided into three roundiſh ſegments.

1. LAVENDULA *Pharm. Lond. & Edinb. Lavendula anguſtifolia C. B. Pſeudonardus quæ lavendula vulgo J. B. Lavendula minor ſive ſpica Ger. & Park. Lavendula Spica Linn.* Lavender: with oblong, very narrow, ſomewhat hoary, undivided leaves; a native of dry gravelly ſoils in the ſouthern parts of Europe, common in our gardens, and flowering in July.

THE flowers of lavender have a fragrant ſmell, to moſt people agreeable, and a bitteriſh, warm, ſomewhat pungent taſte: the leaves are weaker and leſs grateful. They are often employed as a perfume; and medicinally, as mild ſtimulants and corroborants, in vertigoes, palſies, tremors, and other debilities of the nervous ſyſtem, both internally and externally.

The flowers are ſometimes taken in the form of conſerve; into which they are reduced, by beating them, while freſh, with thrice their weight of double refined ſugar. Their fragrance is leſs injured by beating or bruiſing them than moſt of the other odoriferous flowers, but is nevertheleſs conſiderably diminiſhed: the flavour of the leaves is of a much leſs deſtructible kind.

Water extracts by infuſion nearly all the virtue both of the leaves and flowers. In diſtillation with water, the leaves yield a very ſmall portion of eſſential oil; the flowers a much larger, amounting, in their moſt perfect ſtate, when they are ready to fall off ſpontaneouſly and the ſeeds begin to ſhew themſelves, to about one ounce from ſixty. The oil is of a bright yellowiſh

Ol. eſſentiale flor. lavend. *Ph. Lond. & Ed.*

lowiſh colour, a very pungent taſte, and poſſeſſes, if carefully diſtilled, the fragrance of the lavender in perfection: it is given internally from one drop to five, and employed in external applications for ſtimulating paralytic limbs and for deſtroying cutaneous inſects. The decoction, remaining after the diſtillation of the oil, is diſagreeably bitteriſh and ſomewhat ſaline.

Rectified ſpirit extracts the virtue of lavender more completely than water. The ſpirit elevates alſo in diſtillation a conſiderable part of the odoriferous matter of the leaves, and greateſt part of that of the flowers; leaving in the inſpiſſated extracts, a moderate pungency and bitteriſhneſs with very little ſmell. A ſpirit prepared by pouring a gallon of proof ſpirit on a pound and a half of the freſh-gathered flowers, and drawing off five pints by the heat of a water bath; or by adding eight pounds of rectified ſpirit to two of the flowers, and drawing off ſeven pounds, is richly impregnated with the fragrance of the flowers. More compounded ſpirits of this kind, in which other aromatics are joined to the lavender, have been diſtinguiſhed by the name of Engliſh or palſy drops: the college of London directs three pints of the ſimple ſpirit of lavender, and one pint of ſpirit of roſemary, to be digeſted on half an ounce of cinnamon, half an ounce of nutmegs, and one ounce of red ſaunders, as a colouring ingredient: the college of Edinburgh, to the ſame quantity of both ſpirits, orders one ounce of cinnamon, two drams of cloves, half an ounce of nutmegs, and three drams of red ſaunders. Theſe preparations are taken internally, on ſugar or in any convenient vehicle, from ten to an hundred drops, and uſed externally in embrocations, &c.

Spiritus lavend. *Ph. Lond.*

—ſimpl. *Ph. Ed.*

Tinct. lavend. comp. *Ph. Lond.*

Spirit. lavend. comp. *Ph. Ed.*

2. LAVENDULA

2. LAVENDULA LATIFOLIA *C. B. Lavendula major ſeu ſpica Pharm. Pariſ. Pſeudonardus quæ vulgo ſpica J. B. Lavendula major ſive vulgaris Park.* Broad lavender: with longer, broader, and hoarier leaves, leſs numerous on the ſtalks and branches; and much larger ſpikes, though ſmaller flowers; common in the ſouthern parts of Europe, but rare among us. The name ſpike is applied by foreign writers to this ſpecies, by ſome of ours to the firſt. Linnæus makes this only a variety of the former.

THE broad-leaved lavender is ſtronger both in ſmell and taſte than the narrow, and yields in diſtillation almoſt thrice as much eſſential oil, but the flavour both of the oil and of the plant itſelf, is much leſs grateful: the oil is likewiſe of a much darker colour, inclining to green. Watery and ſpirituous extracts, made from the two ſorts of lavender, are very nearly alike; the difference ſeeming to reſide only in the volatile parts.

LAUROCERASUS.

LAUROCERASUS Pharm. Pariſ. Ceraſus folio laurino C. B. Prunus Lauro-ceraſus Linn. LAUREL, CHERRY-BAY: an evergreen tree or ſhrub, with large, thick, oblong, gloſſy leaves, pointed at both ends, and ſlightly indented: towards the tops of the branches come forth pentapetalous flowers, in five-leaved cups, followed by cluſters of berries, like cherries or damſons. It is cultivated in gardens, flowers in May, and ripens its fruit in Auguſt or September.

THE leaves of the lauroceraſus have a bitter taſte, accompanied with a flavour reſembling that

that of the kernels of certain fruits, as thoſe of black cherries, apricots, bitter almonds, &c. Like thoſe kernels, they communicate an agreeable flavour both to watery and ſpirituous liquors, by diſtillation and by infuſion; and, like them alſo, they appear from ſome late trials to be poiſonous. A diſtilled water, ſtrongly impregnated with their flavour, given in the quantity of four ounces to a large maſtiff dog, occaſioned in a few minutes terrible convulſions, and within an hour put an end to his life: dogs have been killed alſo, in a few minutes, by ſmaller quantities, of the diſtilled water, of an infuſion of the leaves in water, and of their expreſſed juice, taken into the ſtomach, or injected by the anus; and there are ſome inſtances of liquors flavoured with the diſtilled water being poiſonous to human ſubjects. The diſſections of dogs killed by this poiſon have ſhewn no other morbid appearances, or alterations, than ſuch as may be reaſonably ſuppoſed the immediate effect of the convulſions: when the diſtilled water, or the leaves in ſubſtance, were given in ſuch ſmall quantities as not to kill, and continued for ſome time, the pulſe became quicker, and the blood more fluid, and of a more florid red colour *(a)*. It is ſaid that infuſions of the leaves (made probably very weak) are commonly uſed in Holland in diſorders of the lungs *(b)*.

The kernel of the fruit is of the ſame nature with the leaves. The pulpy part diſcovers no ill quality to the palate, is coveted by birds, and appears to be innocent.

(a) See Dr. Langriſh's *experiments on brutes*, and No. 418 and 420 of the *philoſophical tranſactions*.

(b) Linnæi *Amænitat. academic.* iv. 40. i. 409.

LAURUS.

LAURUS.

LAURUS Pharm. Lond. & Edinb. Laurus vulgaris C. B. Laurus nobilis Linn. BAY: an evergreen tree or ſhrub, with oblong, ſtiff, ſmooth leaves, pointed at both ends, pale yellowiſh, monopetalous flowers, divided into four ſections; and oblong dry berries, containing, under a thin black ſkin, a horny ſhell, within which are lodged two dark browniſh ſeeds joined together. It is a native of the ſouthern parts of Europe, and not uncommon in our gardens; it flowers in April and May, and ripens its berries in September. The ſhops have been commonly ſupplied with the berries from the Streights.

THE leaves of the bay have a light agreeable ſmell, and a weak aromatic roughiſh taſte: in diſtillation with water they yield a ſmall quantity of a very fragrant eſſential oil: with rectified ſpirit they afford a moderately warm pungent extract. The berries are ſtronger both in ſmell and taſte than the leaves, and yield a larger quantity of eſſential oil: they diſcover likewiſe a degree of unctuoſity in the mouth, give out to the preſs an almoſt inſipid fluid oil, and on being boiled in water a thicker butyraceous one, of a yellowiſh green colour, impregnated with the flavour of the berry.

Oleum expreſſum baccarum lauri *Ph. Ed.*

The leaves and berries of the bay are accounted ſtomachic, carminative, and uterine: in theſe intentions, infuſions of the leaves are ſometimes drank as tea; and the eſſential oil of the berries given, on ſugar or diſſolved by means of mucilages or in ſpirit of wine, from one to five or ſix drops. The principal uſe of

theſe ſimples in the preſent practice is external: they are made ingredients in carminative glyſters, warm cataplaſms, and uterine baths; and the butyraceous oil of the berries ſerve as a baſis for ſome nervine liniments, and mercurial and ſulphureous unguents.

* Bergius relates that he has very frequently ſeen protracted intermittents cured by a mixture of two ſcruples of powder of bay berries and ſix grains of capſicum ſeeds, divided into three doſes, one given at the firſt acceſſion of the rigor, another, the next day at the ſame hour, and the third on the ſucceeding day. *Mat. Med.* i. 144.

LAZULI LAPIS.

LAPIS CÆRULEUS; *Lapis cyanus*; *Cæruleum nativum.* LAPIS LAZULI: a compact ponderous foſſil; leſs hard than flint; of a deep blue colour, variegated commonly with gold or ſilver coloured points or veins; retaining its colour in a moderately ſtrong fire, in a very ſtrong one calcining to a brown, and at length melting into a duſky coloured glaſs with bluiſh clouds; loſing its colour, and in great part diſſolving, by digeſtion in mineral acids; ſaid to be found in the mines of gold, ſilver, and copper, in the eaſtern countries and in ſome parts of Germany *(a)*.

THIS ſtone, levigated into an impalpable powder, and freed from the groſſer parts by waſhing with water, has been given in doſes of half a dram and a dram, and ſaid to operate ſtrongly by ſtool and vomit. Some have re-

(a) See Cronſtedt's *mineral ſyſtem, and* Marggraf's *chemical works.*

commended

commended it in epilepsies and intermitting fevers: Dolæus tells us, that in this last disorder, the above doses, taken on the approach of a fit, with two or three spoonfuls of brandy, were with him a singular secret. The ancients supposed, that it evacuates chiefly what they called melancholic humours or adust black bile, probably, as Geoffroy suspects, on account of its tinging the feces black; a property, from which it may rather be presumed that the mineral participates of iron. The constringing power, which is likewise ascribed to it, depends perhaps on this ingredient; but neither its real medical qualities, nor its chemical composition, are as yet known. Its ferrugineous impregnation is apparent, from its yielding yellow martial flowers on sublimation with sal ammoniac, and from solutions of it in mineral acids affording a blue precipitate with the tincture of Prussian blue described under the article *ferrum*. It has been generally supposed to participate pretty largely of copper; but pure lapis lazuli gives no mark of copper; and those, who speak of experiments discovering that metal in it *(a)*, have probably taken for lapis lazuli some other blue stones, as the lapis armenus, which plainly contains copper, and which some celebrated naturalists have ranked as a species of the lazuli. The lapis armenus may be readily distinguished, by its being less hard than the lazuli, soon losing its blue colour in moderate fire, and raising an effervescence with acids, its basis seeming to be a calcareous earth.

LENTISCUS.

LENTISCUS vulgaris C. B. Lentiscus verus ex insula chio cortice & foliis fuscis Commel. Pis-

(a) Hoffman, *in notis ad Poterium, p.* 628.

tachia Lentiſcus Linn. LENTISK or MASTICH TREE: an evergreen tree or ſhrub, with ſoft flexible branches hanging downwards, and ſmall ſtiff leaves, pointed at both ends, ſet in pairs on a furrowed rib, which terminates in a ſoft prickle: ſome trees produce reddiſh imperfect flowers, in the boſoms of the leaves; others, cluſters of black firm berries including a whitiſh kernel. It is a native of the ſouthern parts of Europe, and bears the ordinary winters of our own climate: large plantations of it are cultivated in the iſland of Chio, on account of the reſinous juice, called maſtich, obtained from inciſions made in the trunk. The wood is ſometimes brought to us from Marſeilles, in thick knotty pieces, covered with a browniſh bark, internally of a whitiſh or pale yellowiſh colour.

THIS wood is accounted a mild balſamic reſtringent: infuſions and decoctions of it are greatly commended, in the German ephemerides, againſt catarrhs, nauſeæ, weakneſs of the ſtomach, and in general as a corroborant and an alterative or ſweetener *(a)*. It may indeed be preſumed, from its ſenſible qualities, to poſſeſs virtues of this kind, though in no very high degree. Its ſmell and taſte are aromatic and reſinous, but very weak: the ſmall tough ſprigs are ſtronger than the larger pieces, and the bark than the wood. It impregnates water with a red colour, and a light agreeable ſmell: to rectified ſpirit it gives a bright yellow tincture, and ſcarce any ſmell. On gently diſtilling off the menſtrua from the filtered liquors, the remaining extracts prove reſinous, ſubaſtringent,

(a) Wenck, *Acta nat. curioſ. dec.* iii. *ann.* ix & x. *p.* 254.

and

and ſlightly pungent: the watery extract diſcovers more of the flavour of the wood, and is in taſte rather ſtronger, though much larger in quantity, than the ſpirituous; the ſpirit covering or ſuppreſſing the ſmell, and not taking up enough of the gummy or mucilaginous matter to render the reſin diſſoluble in the mouth. According to Cartheuſer's experiments, the watery extract amounts to one eighth the weight of the wood, the ſpirituous to one twentieth or one ſixteenth.

LEPIDIUM.

LEPIDIUM: a plant with undivided leaves, and ſmall tetrapetalous white flowers on the tops of the ſtalks and branches, followed by little ſhort heart-ſhaped ſharp-pointed pods, which are divided longitudinally into two cells full of minute ſeeds.

1. LEPIDIUM *latifolium C. B. & Linn. Piperitis. Raphanus ſylveſtris Belgis & Gallis.* DITTANDER, PEPPERWORT, POOR-MANS-PEPPER: with oblong, broad, acuminated, ſerrated leaves. It is perennial, and found wild in ſome parts of England by the ſides of rivers and in other moiſt ſhady places.

2. IBERIS, *ſeu Cardamantica: Iberis latiore folio C. B. Lepidium gramineo folio ſive iberis Tourn. Lepidium Iberis Linn.* Sciatica creſſes: with long narrow leaves, the lower on long pedicles and ſerrated; the upper entire, without pedicles. It is annual; a native of the ſouthern parts of Europe; and raiſed in our gardens, as the preceding, for culinary uſe.

THESE herbs, when freſh, have a quick penetrating pungent taſte; which is in great part

diſſipated or deſtroyed by exſiccation, retained in the expreſſed juice, extracted by water and by rectified ſpirit, and elevated by both menſtrua in diſtillation or evaporation. They are recommended as antiſeptics, ſtomachics, attenuants, and aperients; and appear to be of the ſame general nature with the *cochleariæ*, *naſturtium*, and other acrid antiſcorbutics. The ſecond ſort has been ſuppoſed particularly ſerviceable, externally, againſt the ſciatica; whence its common Engliſh name.

LEVISTICUM.

LIGUSTICUM ſeu Leviſticum, Pharm. Edinb. Liguſticum vulgare C. B. Angelica montana perennis paludapii folio Tourn. Liguſticum Leviſticum Linn. LOVAGE: a tall umbelliferous plant, with large leaves divided and ſubdivided into ſections like thoſe of ſmallage: the umbels ſtand on ſhort pedicles, with ſeveral little leaves at the origin of each of the primary ones, and a few at the ramifications; the ſeeds are of a pale brown colour, oblong, plano-convex, marked with five longitudinal ridges; the root thick, fleſhy, juicy, branched, of a dark browniſh colour on the outſide, and a whitiſh or pale yellowiſh within. It is a native of the ſouthern parts of Europe, and raiſed with us in gardens: it is perennial, flowers in June, and ripens its ſeeds in Auguſt.

ALL the parts of this plant are of the aromatic kind; of a ſtrong flavour, ſomewhat like that of angelica, but leſs agreeable; ſuppoſed particularly uſeful in female diſorders. The leaves, which have been generally made choice of in this intention, have the moſt unpleaſant ſmell,

ſmell, and ſuffer no great loſs of it in keeping for ſome months; their taſte is moderately warm, and acrid, and very durable in the mouth and throat. The root, whoſe ſmell is nearly of the ſame kind with that of the leaves, though more approaching to gratefulneſs, diſcovers to the taſte a conſiderable ſweetneſs joined to its mild aromatic warmth; an extract made from it by water retains little more than the ſweet matter; the flavour exhaling in the inſpiſſation, and impregnating the diſtilled fluid, from which, if the quantity of the root ſubjected to the operation be large, a ſmall portion of eſſential oil ſeparates: an extract made by rectified ſpirit retains the aromatic part as well as the ſweet, and proves moderately warm, but much leſs ſo than the extract of angelica: towards the end of the inſpiſſation of the ſpirituous tincture, a thin unctuous matter appears upon the ſurface, in taſte highly aromatic, and which ſeems to be the part that gives activity to the reſt of the maſs. The ſeeds of the plant have little of the ſweetneſs of the roots, but are rather of more warmth and pungency, and of a more agreeable flavour.

LICHEN.

LIVERWORT: a kind of imperfect vegetable production, conſiſting of ſpreading leaves, of a leathery cruſtaceous matter. A ſort of flowers both male and female have been diſcovered in it, the latter producing innumerable ſeeds, like meal.

LICHEN *terreſtris cinereus Raii. Lichen caninus Linn.* Aſh-coloured ground liverwort: conſiſting of roundiſh pretty thick leaves, divided

about the edges into obtuſe ſegments, flat above, of a reticular texture underneath, faſtened to the earth by ſmall fibres; when in perfection, of an aſh grey colour; by age turning darker coloured or reddiſh. It grows on commons and open heaths, ſpreads quickly on the ground, and is to be met with at all times of the year, but is ſuppoſed to be in its greateſt vigour about the end of autumn.

THIS herb is ſaid to be a warm diuretic. It is particularly celebrated as a preſervative againſt the terrible conſequences of the bite of a mad dog: an account of the remarkable efficacy, in this intention, of a powder compoſed of the dry leaves and black pepper, was communicated to the royal ſociety by Mr. Dampier, and publiſhed in No. 237 of the Philoſophical Tranſactions. This powder was afterwards inſerted, in the year 1721, into the London pharmacopœia, at the deſire of Dr. Mead, who had large experience of its good effects, and who declares, that he had never known it to fail, where it had been uſed, with the aſſiſtance of cold bathing, before the hydrophobia began. He directs a dram and a half of the powder to be taken in the morning faſting, in half a pint of cows milk warm, for four mornings ſucceſſively: previouſly to theſe four doſes, the patient is to be blooded nine or ten ounces; and after them, to be dipt in cold water every morning faſting for a month, and then dipt thrice a week for a fortnight longer *(a)*. The powder was originally compoſed of equal parts of the lichen and pepper: but this quantity of

(a) Mechanical account of poiſons, eſſay iii.

pepper

pepper rendering the medicine too hot, only one part was afterwards uſed to two of the lichen. It is now expunged.

If cold bathing, bleeding, black pepper, and lichen, conjointly, be really of ſufficient efficacy againſt the poiſon of the mad dog, it will not perhaps follow that any ſhare of this efficacy belongs to the lichen: and indeed greater ſtreſs has been laid in general on the cold bath, than on this or the other parts of the preſcription. The lichen does not promiſe to have any valuable medicinal power: to the organs of taſte or ſmell it diſcovers no activity: taken by itſelf, in double the quantity above preſcribed, it did not appear to have any ſenſible operation. Digeſted in rectified ſpirit, it tinged the menſtruum of a deep yellowiſh green colour: on diſtilling off the ſpirit from the filtered tincture, the remaining grumous extract had very little taſte, and amounted only to twenty-ſix grains from two ounces, or about one thirty-ſeventh of the weight of the lichen. A decoction of the herb in water was browniſh, and of a faint ſmell, ſomewhat like that of muſhrooms: the extract, obtained by inſpiſſating it, weighed one eighth of the lichen, and had ſome taſte, but ſo little, that it is hard to ſay of what kind.

* LICHEN ISLANDICUS *Linn. Lichen Pharm. Edinb. Lichen terreſtris, foliis Eryngii, Buxb. Cent.* II. *Lichenoides rigidum, Eryngii folia referens, Raii & Dillen.* Eryngo-leaved, or eatable Iceland, liverwort. This ſpecies of lichen conſiſts of nearly erect leaves, ſtiff when dry, but ſoft and pliant when moiſt, irregularly divided into broad diſtant ſegments, ſmooth, and ciliated at the margins. It grows in the mountainous

mountainous parts of this country, and in various other parts of Europe.

The Iceland lichen infuſed in water gives a bitteriſh liquor, which is reddened by a mixture of martial vitriol. A decoction of it is very thick and viſcid; and on cooling concretes into a ſtrong gelly. An ounce of the lichen boiled for a quarter of an hour in a pound of water, and afterwards ſtrained, yielded ſeven ounces of a mucilage as thick as that procured by the ſolution of one part of gum-arabic in three of water.

The inhabitants of Iceland make great uſe of this lichen both as food and as phyſic. When freſh, according to Borrichius *(a)*, it is employed as a purgative; but Olafsen *(b)* denies that it has any more than a very gently opening quality. It is uſually dried and ground into a meal, with which they make pottage and other preparations, adding either water or milk, and find it an agreeable and very nutritive article of food. It is beſt firſt to ſteep it for a ſufficient time in water, in order to extract the bitterneſs.

The prepared lichen has been much uſed of late, particularly at Vienna, as a remedy for conſumptive diſorders. The celebrated Scopoli *(c)* has publiſhed ſome caſes of its ſucceſsful exhibition in the phthiſis; and other practitioners *(d)* have confirmed his account. It is uſed boiled in milk to a kind of pottage, of which the patient's diet is chiefly to conſiſt. It is ſaid to be antiſeptic, eaſy of digeſtion, and

(a) Bartholini Act. med. Hafn. 1671.

(b) Journey to Iceland.

(c) Annus 2. hiſtorico-natural. p. 114.

(d) Bergius, *mat. med.* 858.

remarkably

remarkably nouriſhing. It is alſo recommended in other caſes, where the ſtomach is ſo weak that common aliments are rejected. The Edinburgh college have received this lichen into their catalogue of ſimples.

LIGNUM ALOES.

LIGNUM ALOES, Xyloaloes, & Agallochum, Pharm. Pariſ. Lignum Calambac. AGALLOCHUM, CALAMBAC, or ALOES WOOD: a wood brought from China, and the inner parts of Tartary, in ſmall pieces, compact and ponderous, of a yelloviſh or ruſty brown colour, with black or purpliſh veins, ſometimes purple with aſh-coloured veins, and ſometimes all over blackiſh. Of its origin, we have no very ſatisfactory account: moſt of the writers, to whom we are indebted for information about the productions of thoſe countries, report, that it is the internal part of certain trees; that a large tree affords only a very ſmall quantity of this valuable part; and that there are ſeveral different ſorts of it, of which the beſt is never brought to us, being ſold in China itſelf for twice or thrice its weight of ſilver.

THE beſt ſort of agallochum wood brought into Europe, has a bitteriſh reſinous taſte, and a light aromatic ſmell. Set on fire, it ſeems to melt like wax, and emits, during the burning, an agreeable fragrance, which continues till the wood is wholly conſumed. It is this fragrance in burning which makes the wood precious in the eaſtern countries for fumigations, and which affords the ſureſt criterion of its genuineneſs and goodneſs. As this wood is apparently very reſinous, rectified ſpirit takes up

up more from it than watery menſtrua: according to Cartheuſer's experiments, an ounce yields with ſpirit three drams of extract, and with water only two. The watery decoction and extract are moderately bitter and ſubacrid. The ſpirituous make leſs impreſſion on the organs of taſte, being leſs diſſoluble in the mouth, or leſs miſcible with the ſaliva: the pure reſin, obtained by precipitation with water from the ſomewhat inſpiſſated ſpirituous tincture, as directed by the faculty of Paris, is ſtill weaker in taſte. Hoffman obſerves, that in diſtillation with water, it yields an eſſential oil, of a whitiſh colour, of a thick conſiſtence, of great fragrance, but in ſmall quantity, not exceeding half an ounce from one hundred and ſixty ounces of the wood: this oil, in which the more valuable parts of the agallochum are concentrated, he recommends, diſſolved in ſpirit of wine, as one of the beſt cordials and corroborants, in weakneſſes of the ſtomach and depreſſions of ſtrength *(a)*.

Reſina ligni aloes *Ph. Pariſ.*

In our ſhops, we rarely meet with any agallochum that anſwers the above characters. In its place have been ſubſtituted woods of an inferiour kind, probably the *aſpalathus*, *lignum aquilæ*, and *calambour* of authors; which are ſaid to be woods of the nature of agallochum, but, when in their greateſt perfection, far weaker.

LIGNUM CAMPECHENSE.

LIGNUM CAMPECHENSE Pharm. Lond. & Edinb. Lignum campeſcanum & lignum indi-

(a) Obſerv. phyſico-chym. lib. i. *obſ.* 4. *Not. ad Poterium, p.* 487. *De medicament. balſamic.* § 15.

cum

cum Mont. exot. Lignum campechianum, ſpecies quædam braſil Sloan. Lignum ſappan quibuſdam. CAMPEACHY WOOD or LOGWOOD: the wood of a prickly pod-bearing tree *(Hæmatoxylum Campechianum Linn.)* a native of Campeachy, in the bay of Honduras; from whence the wood is brought over in large compact hard logs of a red colour.

THIS wood, imported from America as a dying drug, has of late been introduced into medicine, and found to be a very uſeful reſtringent and corroborant, in diarrhœas, dyſenteries, and other diſorders from a laxity of the ſolids. It has a ſweetiſh ſubaſtringent taſte, and no remarkable ſmell: extracts made from it, by water and ſpirit, have a great degree of ſweetneſs, mixed with a mild grateful aſtringency. It gives a deep purpliſh red tincture both to watery and ſpirituous menſtrua * *(a)*; and frequently tinges the ſtools, and ſometimes the urine, of the ſame colour: of this the patient ought to be appriſed, that he may not be alarmed by judging the colour of the diſcharge to be owing to blood.

Watery menſtrua readily extract part of the virtue of this wood, but are very difficultly made to take up the whole. To promote the extraction, the wood ſhould previouſly be reduced into fine powder, which is to be ſtrongly boiled in the water, in the proportion, for example, of a pound to a gallon, till half the

* *(a)* Pure rain water acquires only a deep orange or mahogany colour from logwood; and rectified ſpirit a fine yellowiſh red. The purple hue ſeems to be communicated by ſome extraneous ſaline matter, as the ſelenitic or aluminous ſalts in hard ſpring water. A very ſmall quantity of fixed alkali will alſo give it ſtill more perceptibly.

liquor

liquor is wasted: the powder will still give a considerable impregnation to the same quantity of fresh water, and this repeatedly for four or five times or oftener: the extract obtained by inspissating the decoctions, of a dark blackish colour in the mass, tinges water of a fine red, like that of the liquors before inspissation, but does not totally dissolve: it is given in doses of from ten grains to a scruple and upwards. Rectified spirit takes up more from the logwood than watery menstrua. Some digest the powdered wood in four times its weight of spirit, and afterwards boil it in water: the matters taken up by the two menstrua are then united into one extract, by inspissating the watery decoction to the consistence of honey, and then gradually stirring in the inspissated spirituous tincture.

Extract. lign. campechens. *Ph. Lond.*

Ph. Ed.

LIGNUM RHODIUM.

RHODIUM or ROSEWOOD: the wood or root of a tree of which we have no certain account; brought from the Canary islands, in long crooked pieces, full of knots, externally of a whitish colour, internally of a deep yellow, with a reddish cast. The largest, smoothest, straightest, heaviest, and deepest coloured pieces should be chosen; and the small, thin, pale, light ones rejected.

This wood has a slightly bitterish, somewhat pungent, balsamic taste, and a fragrant smell, especially when scraped or rubbed, resembling that of roses. Digested in rectified spirit, it gives out pretty readily the whole of its active matter, and tinges the menstruum of a reddish yellow colour: on committing to distillation the filtered

filtered tincture, the ſpirit brings over little or nothing of its flavour; the fine ſmell, as well as the balſamic pungency, of the rhodium, remaining nearly entire in the inſpiſſated extract, which proves tenacious and adheſive like the turpentines. Infuſed in water, it gives out likewiſe great part of its ſmell and taſte, together with a bright yellow colour: in evaporation, the water carries off the ſpecific flavour of the wood, leaving in the extract only a ſlight pungency and bitteriſhneſs. Diſtilled with water, it gives over, ſomewhat difficultly and ſlowly, a highly odoriferous eſſential oil, at firſt of a gold colour, by age turning reddiſh, amounting, if the rhodium is of a good kind, to about one ounce from fifty: the diſtilled water is likewiſe agreeably impregnated with the fragrance of the rhodium, and reſembles that of damaſk roſes.

The eſſential oil is uſed as a perfume, for ſcenting pomatums, &c. and in this light only the rhodium wood is generally regarded. It promiſes, however, to be applicable to more important purpoſes, and bids fair to prove a valuable cordial and corroborant.

LILIUM.

LILIUM ALBUM Pharm. Edinb. Lilium album flore erecto & vulgare C. B. Lilium candidum Linn. WHITE LILY: a plant with a ſingle ſtraight round ſtalk, clothed with oblong, acuminated, thick, ſmooth, pale green, ribbed leaves, which have no pedicles; bearing on the top ſeveral elegant, naked, white, upright, hexapetalous, bell ſhaped flowers, which open ſucceſſively, and are followed each by an oblong triangular capſule, divided into three cells full of

of browniſh ſeeds: the root is a ſingle bulb, compoſed of fleſhy ſcales, with ſeveral fibres at the bottom. It is perennial, a native of Syria and Paleſtine, common in our gardens, and flowers in June.

The flowers of the white lily have a pleaſant ſweet ſmell, and a ſlightly mucilaginous taſte. Their odorous matter is of a very volatile kind, being totally diſſipated in drying, and totally carried off in evaporation by rectified ſpirit as well as water: both menſtrua become agreeably impregnated with it by infuſion or diſtillation, but no eſſential oil has been obtained, though many pounds of the flowers were ſubmitted to the operation at once. The principal uſe of theſe flowers is for flavouring expreſſed oils; which, by inſolation with freſh parcels of them continued about three days each time, are ſuppoſed to receive from them, along with their ſmell, an anodyne and nervine virtue. The diſtilled water has been ſometimes employed as a coſmetic.

Oleum liliorum, fuſinum, &c.

The roots alſo have been uſed chiefly for external purpoſes; as an ingredient in emollient and ſuppurating cataplaſms: they abound with a ſtrong mucilage, and do not ſeem to have much active matter beſides. Gerard indeed relates, that ſeveral perſons were cured of dropſies, by the conſtant uſe, for a month or ſix weeks, of bread made of barley-meal with the juice of white lily roots: but there are examples of ſimilar cures being obtained by the uſe of common dry bread; and probably in one caſe, as well as in the other, abſtinence from liquids was the remedy.

LILIUM

LILIUM CONVALLIUM.

LILIUM CONVALLIUM album C. B. Convallaria, Maianthemum. Convallaria maialis Linn. LILY OF THE VALLEY, MAY LILY: a plant with two or three oblong, acuminated, ribbed leaves; in the boſoms of which ariſes a naked ſtalk bearing a number of ſmall, naked, white, drooping, bell-ſhaped, monopetalous flowers, cut about the edges into ſix ſegments, and followed by red berries: the roots are long, ſlender, and white. It is perennial, grows wild in woods and ſhady places, and flowers in May.

THE flowers of this plant have a fragrant delightful ſmell, and a penetrating bitteriſh taſte; both which they readily impart to watery and to ſpirituous menſtrua. Their odorous matter, like that of the white lily, is very volatile; being totally diſſipated in exſiccation, and elevated in diſtillation both by water and rectified ſpirit: there is no appearance of eſſential oil in either diſtillation; nor does the diſtilled ſpirit turn milky on the admixture of water, as thoſe ſpirits do, which are impregnated with actual oil. The pungency and bitterneſs, on the other hand, reſide in a fixt matter, which remains entire both in the watery and ſpirituous extracts, and which, in this concentrated ſtate, approaches, as Cartheuſer obſerves, to hepatic aloes.

It is principally from the volatile parts of theſe flowers, that medicinal virtues have been expected, in nervous and catarrhous diſorders; but probably their fixt parts alſo have no ſmall, perhaps the greateſt, ſhare in their efficacy. The

flowers, dried and powdered, and thus diveſted of their odoriferous principle, prove ſtrongly ſternutatory. Watery or ſpirituous extracts made from them, given in doſes of a ſcruple or half a dram, act as gentle ſtimulating aperients and laxatives; and ſeem to partake of the purgative virtue, as well as of the bitterneſs, of aloes.

The roots have nothing of the fine ſmell which is admired in the flowers, but diſcover to the taſte, a greater degree of penetrating bitterneſs. The bitter matter appears to be of the ſame kind in theſe as in the flowers; being equally extracted by water and ſpirit; remaining entire behind upon inſpiſſating the tinctures or infuſions; acting as a ſternutatory when ſnuffed up the noſe, and as a laxative or purgative when taken internally.

The leaves have the ſame kind of bitterneſs, in a lower degree, mixed with a conſiderable roughneſs, and a ſlight ſweetiſhneſs.

LIMACES.

LIMACES terreſtres ſive Cochlæ terreſtres. The Snail: an animal, lodged in a ſhort thick turbinated ſhell, whoſe aperture is cloſed in the winter with a kind of cement. The large aſh-coloured ſnail is ſaid to be the ſpecies intended for medicinal uſe; but the ſmaller, dark-coloured, ſpotted, ſtriped ſort, more common in gardens, is taken indiſcriminately, and appears to be not at all different in quality from the other.

This animal abounds with a viſcid ſlimy juice, which it readily gives out, by boiling, to milk or water, ſo as to render them thick and

and glutinous. The decoctions in milk are apparently very nutritious and demulcent, and ſtand recommended in a thin acrimonious ſtate of the humours, in conſumptive caſes, and emaciations.

LIMONES.

LIMON Pharm. Lond. Limonia mala Pharm. Edinb. LEMONS: the fruit of the *malus limonia fructu acido Pharm. Lond. malus limonia acida C. B. Citrus Limon Linn.* a tree reſembling the orange; from which it differs chiefly in the leaves having no appendages at the bottom; and in the fruit having a nipple-like production at the end: it is a native of Aſia, and cultivated in the warmer parts of Europe, from whence we are ſupplied with the fruit. There are many varieties of this tree in regard to the fruit: by Linnæus, the ſeveral citrons, as well as lemons, are reckoned varieties of one ſpecies, which is diſtinguiſhed from thoſe of the orange kind, only by the pedicles of the leaves being naked. The terms citron and lemon have been often confounded together; what is commonly called citron by the French *(a)* and Germans *(b)* being our lemon, and their lemon our citron.

THE yellow rind of lemons is a grateful aromatic, of common uſe in ſtomachic tinctures and infuſions, and for rendering other medicines acceptable to the palate and ſtomach: its flavour is one of thoſe which is beſt adapted for

(a) Codex medicamentarius facultatis Pariſienſis, p. xxxviii. & lxx.

(b) Hoffman, *Diſſert. de citriis, Opera omnia, ſupplement.* ii. *par.* i. *p.* 720.

accompanying medicines of the bitter kind. It is leſs hot than orange peel, and yields in diſtillation a leſs quantity of eſſential oil: the oil is extremely light, almoſt colourleſs, in ſmell nearly as agreeable as the freſh peel, and frequently employed as a perfume: it is generally brought to us from the ſouthern parts of Europe, under the name of *eſſence* of lemons. The flavour of the lemon peel is more periſhable in keeping than that of orange peel, yet does not riſe ſo eaſily in diſtillation with ſpirit of wine: for a ſpirituous extract, prepared from the rind of lemons, retains the aromatic taſte and ſmell of the peel in a much greater degree than an extract prepared in the ſame manner from that of oranges. After digeſtion in the ſpirit, lemon peel proves tough, that of oranges criſp.

Ol. ſtillat. cort. limon. *Ph. Ed.*

Eſſentia limonum *Ph. Lond.*

The juice of lemons differs from that of oranges only in being more acid. Six drams of it ſaturate about half a dram of fixt alkaline ſalt: this mixture, with the addition of a ſmall quantity of ſome grateful aromatic water or tincture, as ſimple cinnamon water, is given in caſes of nauſeæ and reachings, and generally abates, in a little time, the ſevere vomitings that happen in fevers, when moſt other liquors and medicines are thrown up as ſoon as taken: it is uſed alſo as a ſaline aperient in icterical, hydropical, inflammatory and other diſorders.

Syrup. e ſucco limonum † *Ph. Lond.* ‡ *Ph. Ed.*

A ſyrup made by diſſolving fifty ounces of fine ſugar in a quart † or two pounds and a half ‡ of the depurated juice, is mixed occaſionally with draughts and juleps as a mild antiphlogiſtic, and ſometimes uſed in gargariſms for inflammations of the mouth and tonſils. The London college alſo direct the inſpiſſated juice to be kept.

Succus ſpiſſat. limon. *Ph. Lond.*

LINARIA.

LINARIA vulgaris lutea flore majore C. B. Oſyris, linaria, ſive urinaria Lobel. Antirrhinum linaria Linn. TOADFLAX: a plant with ſmooth round bluiſh ſtalks, and numerous, oblong, narrow, pointed leaves; greatly reſembling the *eſula minor* or pine ſpurge, ſo as ſcarcely to be otherwiſe diſtinguiſhable, before flowering, than by its wanting the milky juice with which the eſula abounds: on the tops of the ſtalks and branches appear ſpikes of yellow, irregular, monopetalous, gaping flowers, with a long tail behind, followed by roundiſh bicapſular ſeed-veſſels: it is perennial, grows wild about the ſides of dry fields, and flowers in June and July.

THE leaves of this herb have a bitteriſh ſomewhat ſaline taſte: and when rubbed betwixt the fingers, yield a faint ſmell, reſembling that of elder. Taken internally, they are ſaid to be powerfully reſolvent, diuretic, and purgative: their principal uſe, however, has been external, in unguents and cataplaſms, for painful ſwellings of the hemorrhoidal veſſels; againſt which they have been ſaid to be particularly effectual.

LINGUA CERVINA.

SCOLOPENDRIUM ſeu lingua cervina Pharm. Edinb. Lingua cervina officinarum C. B. Phyllitis Gerard. Aſplenium Scolopendrium Linn. HARTS-TONGUE: a plant with long, uncut, narrow bright green leaves, ſet on long hairy pedicles, and nipt at the bottom: it has no

ſtalks or manifeſt flowers; the ſeeds are a fine duſt, lying in large, rough, brown, tranſverſe ſtreaks on the backs of the leaves. It is perennial, and found green at all times of the year, in moiſt, ſhady, ſtony places.

THE leaves of harts-tongue ſtand recommended as aperients and corroborants, in obſtructions of the hypochondriacal viſcera, laxities of the inteſtines, and ſome diſorders of the breaſt: they have been chiefly uſed in apozems and infuſions, along with maidenhair, ſpleenwort, and other plants of the ſame kind, with which they appear to agree in virtue. To the taſte they are ſlightly roughiſh and ſweetiſh: with ſolution of chalybeate vitriol, they ſtrike a blackiſh colour. When freſh, they yield, on being rubbed or bruiſed, a faint unpleaſant ſmell, which in drying is in great part diſſipated.

LINI SEMEN.

LINI SEMEN Pharm. Lond, & Edinb. Lini ſativi C. B. Lini uſitatiſſimi Linn. LINSEED: reddiſh-brown, gloſſy, ſlippery, flat, pointed nearly oval ſeeds, of the common flax; an annual herb, cultivated in fields, on account of the mechanic uſes of its tough filamentous rind.

THESE ſeeds have an unctuous, mucilaginous, ſweetiſh taſte, and no remarkable ſmell. On expreſſion, they yield a large quantity of oil; which, when carefully drawn, without the application of heat, has no particular taſte or flavour, though in ſome properties it differs conſiderably from moſt of the other oils of this kind; not congealing in winter; not forming a ſolid ſoap

Oleum expreſſum ſeminum lini *Ph. Ed.*

Oleum e ſem. lini *Ph. Lond.*

ſoap with fixt alkaline ſalts *(a)*; acting more powerfully, as a menſtruum, on ſulphureous bodies, than any other expreſſed oil that has been tried. The ſeeds, boiled in water, yield a large proportion of a ſtrong flavourleſs mucilage: to rectified ſpirit they give out little or nothing.

Infuſions of linſeed, like other mucilaginous liquors, are uſed as emollients, incraſſants, and obtunders of acrimony, in heat of urine, ſtranguries, thin defluxions on the lungs, and other like diſorders: a ſpoonful of the ſeeds, unbruiſed, is ſufficient for a quart of water, larger proportions rendering the liquor diſagreeably ſlimy. The mucilage obtained by inſpiſſating the infuſions, or decoctions, is an excellent addition for reducing diſguſtful powders into the form of an electuary; occaſioning the compound to paſs the fauces freely, without ſticking or diſcovering its taſte in the mouth. The expreſſed oil is ſuppoſed to be more of a healing and balſamic nature than the other oils of this claſs; and has been particularly recommended in coughs, ſpitting of blood, colics, and conſtipations of the belly. The ſeeds in ſubſtance, or the matter remaining after the expreſſion of the oil, are employed externally, in emollient and maturating cataplaſms. In ſome places, theſe ſeeds, in times of ſcarcity, have ſupplied the place of grain, but appeared to be an unwholeſome, as well as an unpalatable food: Tragus relates, that thoſe who fed upon them in Zealand, had the hypochondres in a ſhort time diſtended, and the face and other parts ſwelled; and that not a few died of theſe complaints.

(a) Geoffroy, *Memoires de l'acad. roy. des ſciences de Paris, pour l'ann.* 1741.

LINUM CATHARTICUM.

LINUM CATHARTICUM Linn. Linum pratenſe floribus exiguis C. B. Chamælinum. PURGING FLAX or MILL-MOUNTAIN: a ſmall plant, with little oblong ſmooth leaves, having one vein or rib running along the middle, joined in pairs cloſe to the ſtalks, which are round, ſlender, reddiſh, divided towards the upper part into fine branches, bearing on the tops white pentapetalous uncut flowers, followed each, as in the common flax, by a roundiſh, ribbed, acuminated capſule, containing ten flattiſh ſlippery ſeeds in as many cells. It is annual, and grows wild on chalky hills, and in dry paſture grounds.

THIS herb is ſaid to be an effectual and ſafe cathartic: an infuſion of an handful of the freſh leaves in whey or white wine, or a dram of the leaves in ſubſtance with a little cream of tartar and aniſeeds, are directed for a doſe. Linnæus recommends an infuſion of two drams of the dry leaves as a mild laxative. Their taſte is bitteriſh and diſagreeable.

LIQUIDAMBRA.

AMBRA LIQUIDA Pharm. Argent. LIQUIDAMBER: a reſinous juice, of a yellow colour inclining to red, at firſt about the conſiſtence of turpentine, by age hardening into a ſolid brittle reſin; obtained from the tree that yields liquid ſtorax, *ſtyrax aceris folio Raii, Liquidambar ſtyraciflua Linn.* growing in Virginia, Mexico, and other parts of America, and bearing the colds of our own climate.

THIS

THIS juice has a moderately pungent, warm, balſamic taſte; and a very fragrant ſmell, not unlike that of ſtorax calamita heightened with a little ambergris. It was formerly in common uſe as a perfume, and might probably be applied to valuable medicinal purpoſes, but it is not at preſent much regarded, different artificial compoſitions having been often ſubſtituted to it in the ſhops.

LITHOSPERMUM.

LITHOSPERMUM MAJUS erectum C. B. Milium ſolis. Lithoſpermum officinale Linn. GROMWELL: a rough plant, with ſtiff branched ſtalks, oblong acuminated leaves ſet alternately without pedicles; and whitiſh monopetalous flowers, ſcarcely longer than the cup, divided into five obtuſe ſections, followed by little roundiſh, hard, pearl-like ſeeds incloſed in the cup. It is perennial, grows wild in dry fields and by road-ſides, and flowers in May and June.

THE ſeeds of gromwell have been accounted notably diuretic; and recommended for cleanſing the kidneys and urinary paſſages from viſcid mucous matters, and promoting the expulſion of gravel. Their virtues do not appear to be very conſiderable; they have no ſmell, and their taſte is little other than farinaceous. They have long been diſcarded from practice.

**LOBELIA.*

LOBELIA Pharm. Edinb. Rapunculus galeatus virginianus flore majore violaceo Moriſon. Lobelia ſiphilitica Linn. BLUE CARDINAL-FLOWER: an herbaceous perennial plant, with an erect

erect ſtalk three or four feet high, and ovate-lanceolate ſubſerrated leaves, bearing long ſpikes of labiated, irregular, blue flowers, each with five ſtamina having connate antheræ, ſucceeded by a bilocular capſule, containing many ſmall ſeeds. The whole plant has a milky juice, and ſomething of a rank ſmell. It grows in moiſt places in Virginia, and bears the winters of our climate.

The root of this plant conſiſts of white fibres, a line in thickneſs, and about two inches in length. It reſembles tobacco in its taſte, which dwells long on the tongue, and is apt to excite vomiting. It was long a famous ſecret among the North American Indians for the cure of the venereal diſeaſe. The ſecret was purchaſed by Sir William Johnſon, and has been made public in the writings of Bartram, Kalm, and others.

The doſe and mode of adminiſtering this medicine are not exactly defined, but the following directions are given as the moſt accurate. A decoction is made of a handful of the roots in three meaſures of water. Of this, half a meaſure is taken in the morning faſting, and repeated in the evening; and the doſe is gradually increaſed till its purgative effect becomes too violent, when the medicine is for a time to be intermitted, and then renewed, till a perfect cure is effected. One doſe daily is ſufficient during the latter part of the treatment; and the regimen during the whole proceſs is to be equally ſtrict with that obſerved in a courſe of mercurial ſalivation. From the third day, the ulcers, are to be well waſhed twice daily with the decoction; and it is ſaid that when they are very deep and foul, the Indians ſprinkle them with powder of the internal bark of the ſpruce-tree.

By

By this method we are assured that inveterate venereal complaints are cured without the aid of mercury; and the Edinburgh college seem to give credit to the efficacy of the lobelia, by receiving it into their latest catalogue of simples.

LUJULA.

LUJULA Pharm. Lond. Trifolium acetosum vulgare C. B. Oxys alba Gerard. Alleluja, oxytriphyllum, & panis cuculi quorundam. Oxalis Acetosella Linn. WOOD SORREL: a plant, with the leaves and flowers issuing on separate pedicles from the root: the leaves are broad, shaped somewhat like a heart, and stand three together: the flowers are solitary, whitish, monopetalous, divided deeply into five segments, followed by angular capsules, which burst on being touched, and shed numerous small browniſh seeds. It is perennial, grows wild in woods, and flowers in April.

THE leaves of the wood sorrel are useful saline antiseptics and antiphlogistics; similar, both in taste and in medicinal virtue, to those of the *acetosæ* or common sorrels, but somewhat more acid, and rather more grateful both to the palate and stomach. Beaten with thrice their weight of fine sugar, they form a grateful subacid conserve. Their expressed juice, depurated, is a very agreeable acid: duly inspissated, and set to shoot, it yields a crystalline acid salt of the same nature with that of the sorrels: the saline matter seems to amount to nearly one hundredth part of the weight of the fresh leaves. Conserva lujulæ *Ph. Lond.*

LUM-

LUMBRICUS.

LUMBRICUS TERRESTRIS. Vermes terreſtres. EARTH WORMS: Theſe inſects are ſuppoſed to have a diuretic and an antiſpaſmodic virtue. The faculty of Paris directs them to be prepared for medicinal uſe, by waſhing and drying them with a moderate heat. Moiſtened with wine, or vinous ſpirits, to prevent their putrefying, and ſet in a cellar, they are almoſt wholly reſolved in a few days into a ſlimy liquor, which is ſaid, when mixed with alkaline ſalts, to yield cryſtals of nitre.

LUPULUS.

LUPULUS Pharm. Pariſ. Lupulus mas & femina C. B. Lupulus ſalictarius Ger. Humulus Lupulus Linn. HOP: a rough plant, with very long, angular, climbing hollow ſtalks, and broad ſerrated leaves, cut generally into three or five ſharp-pointed ſections, and ſet in pairs at the joints: on the tops grow looſe ſcaly heads, with ſmall flat ſeeds among them. It is found wild in hedges and at the bottoms of hills, in England and other parts of Europe, but commonly cultivated in large plantations. It is perennial, and ripens in Auguſt or September its leafy heads, which are cured by drying with a gentle heat on kilns made for that purpoſe.

HOPS have a very bitter taſte, leſs ungrateful than moſt of the other ſtrong bitters, accompanied with ſome degree of warmth and aromatic flavour. They give out their virtue by maceration without heat, both to rectified and proof

proof ſpirit; and, by warm infuſion, to water: to cold water they impart little, though macerated in it for many hours. The extracts obtained both by watery and ſpirituous menſtrua, particularly by the latter, are very elegant balſamic bitters, and promiſe to be applicable to valuable purpoſes in medicine; though the hop is at preſent ſcarcely regarded as a medicinal article, and ſcarcely otherwiſe uſed than for the preſerving of malt liquors; which by the ſuperaddition of this balſamic, aperient, diuretic bitter, become leſs mucilaginous, more detergent, more diſpoſed to paſs off by urine, and in general more ſalubrious.

LYCOPERDON.

LYCOPERDON ſive Crepitus lupi. Fungus rotundus orbicularis C. B. Boviſta officinarum Dill. Lycoperdon Boviſta Linn. PUFFBALL: a round or egg-ſhaped whitiſh fungus, with a very ſhort or ſcarcely any pedicle, growing in dry paſture grounds; when young, covered with tubercles on the outſide, and pulpy within; by age becoming ſmooth without, and changing internally into a very fine, light, browniſh duſt.

THE dried fungous matter and the duſt of lycoperdon have been long uſed among the common people, particularly in Germany, for reſtraining the bleeding of wounds, and immoderate hemorrhoidal fluxes, and drying up running ulcers. In ſome late trials, the duſt has been found to produce the ſame effect, in ſtopping hemorrhages after amputation, as the celebrated agaric of the oak.

MACIS.

MACIS.

MACIS Pharm. Lond. Macis officinarum C. B. Mace: a pretty thick, tough, unctuous membrane, reticular or variouſly chapt, of a lively reddiſh yellow colour approaching to that of ſaffron, enveloping the ſhell of the fruit whoſe kernel is the nutmeg. The mace, when freſh, is of a blood-red colour, and acquires its yellow hue in drying: it is dried in the ſun, upon hurdles fixed above one another, and then, as is ſaid, ſprinkled with ſea-water, to prevent its crumbling in carriage.

Mace has a pleaſant aromatic ſmell, and a warm, bitteriſh, moderately pungent taſte. It is in common uſe as a grateful ſpice; and appears to be, in its general qualities, nearly ſimilar to the nutmeg, both as the ſubject of medicine and of pharmacy. The principal difference conſiſts in the mace being much warmer, more bitteriſh, leſs unctuous, and ſitting eaſier on weak ſtomachs; in its yielding by expreſſion a more fluid oil, and in diſtillation with water a more ſubtile volatile one. What is called in the ſhops expreſſed oil of mace is prepared, not from this ſpice, but from the nutmeg.

MAGNESIA.

MAGNESIA ALBA Pharm. Lond. & Edinb. Magnesia: a fine white earth; ſoluble readily in all acids, the vitriolic as well as the others, into a bitter purgative liquor.

This earth has not hitherto been found naturally pure or in a ſeparate ſtate: it was for ſeveral

veral years a celebrated ſecret in the hands of ſome particular perſons abroad, till the preparation was made public by Lanciſi in the year 1717 *(a)*, and afterwards by Hoffman in 1722 *(b)*. It was then extracted from the mother-lye, or the liquor which remains after the cryſtallization, of rough nitre; either by precipitation with a ſolution of fixt alkaline ſalt; or by evaporating the liquor, and calcining the dry reſiduum, ſo as to diſſipate the acids by which the earth had been made diſſoluble.

The magneſia, in this mother-lye, appears to have proceeded from the vegetable aſhes, which are either made ingredients in the compoſitions from which nitre is obtained, or elſe added in the elixation of the nitre: for the aſhes of different woods, burnt to perfect whiteneſs, and freed from their alkaline ſalt, were found to be, in part, of the ſame nature with the true magneſia *(c)*. But as quicklime alſo, in moſt of the German, French, and other European nitre-works, is commonly employed in large quantity, the earth obtained from the mother-lyes of thoſe works is rather a calcareous earth than magneſia. What is now brought from abroad, under the name of magneſia, gives plain proofs of its calcareous nature, by its burning into quicklime, and forming a ſelenites with the vitriolic acid.

(a) Annot. in Mercati metallothec. vatican. Arm. ii. *cap.* x. *p.* 50.

(b) Obſervationes Phyſico-chymicæ, lib. ii. *obſ.* 2.

(c) Of vegetable aſhes, moderately or ſtrongly calcined, only a part was found to diſſolve in acids, and this part appeared to be perfect magneſia. It is probable that the remainder might be reduced to the ſame ſtate by repeating the calcination.

The

The true magnesia is obtained in great purity, from a filtered solution of *sal catharticus amarus*, by adding a filtered solution of any alkaline salt. *This, by its superiour affinity with the vitriolic acid of the sal catharticus, precipitates its earthy basis, which is the magnesia. The method of conducting the process is thus directed in the last Edinburgh dispensatory. Dissolve separately equal weights of sal catharticus, and any pure fixed alkaline salt, in double their weight of water. Strain, and then mix them, and immediately add eight times the quantity of hot water. Let the liquor boil a while over the fire, and at the same time agitate it. Then let it stand till the heat be abated; and strain it through a linen cloth, on which the magnesia will be left. This is to be washed by affusions of pure water till it become perfectly tasteless. The London pharmacopœia directs two pounds of each of the salts to be dissolved separately in ten pints of water, and the liquors strained and mixed. The mixture is now to be boiled a little, and then strained through linen as in the former process.

*A method of preparing magnesia in the most perfect and convenient manner, was published by Mr. Henry in vol. ii. of the *Medical Transactions*. The same writer, likewise, in a publication of *Experiments and Observations* on various subjects, recommends the *calcination* of magnesia, as rendering it a fitter medicine in certain cases. Magnesia is found by experiment to contain above half its weight of fixed air. The evolution of this in the stomach may increase flatulency, and cause uneasiness in weak bowels. By strong calcination the air is expelled from magnesia, while its purgative virtue remains unimpaired; nor does it acquire any

of

of the acrimony or cauſticity of lime. The London and Edinburgh colleges have now received this preparation, under the title of *magneſia uſta*.

The magneſia is recommended by Hoffman as an uſeful antacid, a ſafe and inoffenſive laxative in doſes of a dram or two, and a diaphoretic and diuretic, when given in ſmall doſes, as fifteen or twenty grains. Since this time, it has had a conſiderable place in the practice of foreign phyſicians, and has of late come into ſome eſteem among us, particularly in heart-burns, and for preventing or removing the many diſorders which children are thrown into from a redundance of acid humours in the firſt paſſages. It is preferred, on account of its laxative quality, to the teſtaceous and other abſorbent earths, which, unleſs gentle purgatives are given occaſionally to carry them off, are apt to lodge in the body, and occaſion a coſtiveneſs very detrimental to infants. It muſt be obſerved, however, that it is not the magneſia itſelf which proves laxative, but the ſaline compound reſulting from its coalition with acids: if there are no acid juices in the ſtomach to diſſolve it, it has no ſenſible operation, and in ſuch caſes it may be rendered purgative by drinking any kind of acidulous liquors after it. All the other known ſoluble earths yield with acids, not purgative, but more or leſs aſtringent compounds.

Magneſia, Manganeſe, *vitrariorum & minerologorum.*

It may be proper to obſerve, that the name magneſia has been principally applied to a ſubſtance of a very different kind; a native mineral, found in iron mines, and in the lead mines of Mendip hills, in Somerſetſhire, uſually of a dark grey colour, ſometimes bright and ſtriated like antimony, ſometimes dull, with only a few ſmall ſtriæ; remarkable for communicating, to

a large proportion of glaſs in fuſion, a purpliſh or red tinge, which diſappears on a continuance of the fire, at the ſame time deſtroying the effect of many other colouring matters, and rendering foul or coloured glaſs clear: ſuppoſed to be an ore of iron, and recommended medicinally, when calcined by a ſtrong fire, as an aſtringent; but yielding no iron, or marks of iron, on any of the common trials by which that metal is diſtinguiſhed in ores; and in its nature and compoſition as yet little known. Mr. Pott relates, that on being calcined with ſulphur, and afterwards elixated with water, it yielded a large quantity of a white cryſtalline ſalt, of a bitteriſh aſtringent taſte, followed by a kind of ſweetneſs; and that the ſalt, after ſtrong calcination, taſted like burnt alum, but more acid *(a)*; from whence it may be preſumed, that this mineral conſiſts in great part of an earth analogous to that of alum, which, in combination with acids, makes one of the ſtrongeſt ſtyptics.

MAJORANA.

MAJORANA Pharm. Lond. & Edinb. Majorana vulgaris C. B. Origanum Majorana Linn. SWEET MARJORAM: a low plant, with ſlender, ſquare, branched, woody ſtalks; and little, oval, ſomewhat downy leaves, ſet in pairs: on the tops grow ſcaly heads of ſmall whitiſh labiated flowers, whoſe upper lip is erect and cloven, the lower divided into three ſegments. It is ſown annually in gardens, for culinary as well as medicinal uſes: the ſeeds, which rarely come to perfection in this country, are procured from the ſouth of France, where the plant is ſaid to be indigenous.

(a) Miſcellanea Berolinenſia, tom. vi.

THE

The leaves and tops of marjoram have a pleaſant ſmell, and a moderately warm aromatic bitteriſh taſte. Infuſions of them in water, in colour browniſh, ſmell pretty ſtrongly, and taſte weakly and unpleaſantly of the herb: the blackiſh green tinctures, made in rectified ſpirit, have leſs ſmell, but a ſtronger and more agreeable taſte. In diſtillation with water, an eſſential oil is obtained, amounting, as Hoffman obſerves, to about one ounce from ſixty-four of the leaves ſlightly dried; when carefully drawn, of a pale yellow colour; by age, or too haſty fire in the diſtillation, contracting a reddiſh hue; of a very hot penetrating taſte, and in ſmell not near ſo agreeable as the marjoram itſelf: the remaining decoction, thus diveſted of the volatile aromatic matter, is weakly, but unpleaſantly bitteriſh and auſtere. Great part of the aromatic matter of the herb riſes alſo in the inſpiſſation of the ſpirituous tincture, and impregnates the diſtilled ſpirit: the remaining extract is ſtronger in taſte than that made with water, its quantity being leſs, but has not much of the warmth or flavour of the marjoram.

This plant has been chiefly recommended in diſorders of the head and nerves, in uterine obſtructions and mucous diſcharges proceeding from what is called a cold cauſe (that is, from a laxity and debility of the ſolids, and a ſluggiſh ſtate of the juices) and in the humoural aſthmas and catarrhs of old people. The powder of the leaves, their diſtilled water, and eſſential oil properly diluted, are agreeable errhines, and accounted particularly uſeful in pituitous obſtructions of the noſtrils, and diſorders of the olfactory organs.

MALABATHRUM.

TAMALAPATRA Folium indum. INDIAN LEAF: the leaf of the *cinamomum ſive canella malavarica & javanenſis C. B. Laurus Caſſia Linn.* or caſia-lignea tree, brought from the Eaſt Indies. It is of a firm texture; of an oblong oval figure, pointed at both ends; ſmooth and gloſſy on one ſide, which is the upper, and leſs ſo on the lower; of a yellowiſh green colour on the former, and a pale brownish on the latter; furniſhed with three ribs, running its whole length, very protuberant on the lower ſide, and two ſmaller ones which bound the edges.

THESE leaves have a remarkable affinity, in one reſpect, with the caſia or bark of the tree, both the leaves themſelves and their pedicles being, like it, extremely mucilaginous: chewed, they render the ſaliva ſlimy and glutinous: infuſed in water, they give out a large proportion of a ſtrong tenacious mucilage. But of the aromatic flavour, which is ſtrong in the bark, the leaves, as brought to us, have very little: they ſcarcely diſcover any warmth or pungency to the taſte, and have little or no ſmell unleſs well rubbed, when they yield an agreeable, though weak, ſpicy odour. They are no otherwiſe made uſe of than as an ingredient in mithridate and theriaca; and are, when in their greateſt perfection, far inferiour to the mace which our college directs as a ſuccedaneum to them.

MALVA.

MALVA Pharm. Lond. & Edinb. Malva ſilveſtris folio ſinuato C. B. Malva ſylveſtris Linn. COMMON MALLOW: a plant with firm branched ſtalks, and roundiſh, notched leaves, ſet alternately on long pedicles: in their boſoms come forth bell-ſhaped monopetalous flowers, deeply divided into five heart-ſhaped ſections, of a pale purpliſh or whitiſh colour variegated with deeper ſtreaks, followed by a number of capſules ſet in form of a flat diſk, and containing each a kidney-ſhaped ſeed: the root is long, ſlender, and whitiſh. It is perennial, common in uncultivated grounds, and found in flower throughout the ſummer.

THE leaves and flowers of the mallow are in taſte mucilaginous, and of no remarkable ſmell. The leaves were formerly of ſome eſteem, as an emollient or laxative dietetic article, in dry conſtipated habits in the warmer climates: at preſent, infuſions or decoctions of the leaves and flowers, and a conſerve made by beating the freſh flowers with thrice their weight of fine ſugar, are ſometimes directed in dyſuries, heat and ſharpneſs of urine, and other like complaints; but the principal uſe of the herb is in emollient glyſters, cataplaſms, and fomentations. The roots have been recommended in diſorders of the breaſt, and though now diſregarded, may perhaps deſerve ſome notice: they have a ſoft ſweet taſte, without any particular flavour, approaching in ſome degree to that of liquorice: an extract made from them by rectified ſpirit of wine is of great ſweetneſs.

MANNA.

MANNA Pharm. Lond. & Edinb. Manna ſeu Ros calabrinus Pharm. Pariſ. MANNA: a ſweet juice obtained from certain aſh trees *(a)* in the ſouthern parts of Europe, particularly in Calabria and Sicily, exuding from the leaves, branches, or trunk of the tree, and either naturally concreted, or exſiccated and purified by art.

* There are three ways in which manna is collected in Calabria. From the middle of June to the end of July, a very clear liquor exudes ſpontaneouſly from the trunk and branches of the tree, which by the ſun's heat concretes into whitiſh maſſes, which are ſcraped off the next morning with wooden knives, and dried in the ſun. This is called *Manna in the tear.* At the beginning of Auguſt, when this ceaſes to flow, the peaſants make inciſions in the bark, whence a juice flows, which concretes in larger maſſes and of a redder colour. This is the *fat* or *common Manna.* Beſides theſe ſorts, a third is procured by receiving the ſpontaneous exudations in June and July on ſtraws or chips of wood faſtened to the tree. This is the *cannulated* or *flaky Manna,* and is accounted the fineſt of the three.

Juices of the ſame nature are collected, in the eaſtern countries, from other trees and ſhrubs *(b):* and ſimilar exudations are ſometimes found on different kinds of trees in Europe, as particularly on the larch in the Brian-

(a) Fraxinus rotundiore folio; & Fraxinus humilior minore & tenuiore folio *C. B.* Fraxinus Ornus *Linn.*

(b) Vide Cluſii *exotic. lib.* i. *p.* 164. Rauwolf *itin. p.* 74. Teixeira *hiſt. Perſ. p.* 29.

çonois

çonois in Dauphiny. How far the manna juices of different vegetables differ from one another, is not well known: but thus much is certain, that one and the ſame tree affords mannas very conſiderably different, in their colour, in their taſte, and in their diſpoſition to aſſume a ſolid concrete form; that is, in their purity, or the greater or leſs admixture of oily or reſinous matter. Manna brigantiaca.

The beſt ſort of the officinal or Calabrian manna is in oblong pieces or flakes, moderately dry, friable, very light, of a whitiſh or pale yellow colour, and in ſome degree tranſparent: the inferiour kinds are moiſt, unctuous, and brown. Both ſorts are ſaid to be ſometimes counterfeited by compoſitions of ſugar, honey, and purgative materials; compoſitions of this kind, in a ſolid or dry form, may be diſtinguiſhed by their weight, compactneſs, and untranſparency: both the dry and moiſt compoſitions may be diſtinguiſhed by their taſte, which is ſenſibly different from that of true manna, and with greater certainty by their habitude to menſtrua.

This juice liquefies in a moiſt air, diſſolves readily in water, and, by the aſſiſtance of heat, in rectified ſpirit alſo; the impurities only being left by both menſtrua. On inſpiſſating the watery ſolution, the manna is recovered of a much darker colour than at firſt. From the ſaturated ſpirituous ſolution, great part of it ſeparates as the liquor cools, concreting into a flaky maſs, of a ſnowy whiteneſs, and a very grateful ſweetneſs: the liquor, remaining after the ſeparation of this pure ſweet part of the manna, leaves, on being inſpiſſated, an unctuous, dark coloured, diſagreeable matter, in greater or leſs

quantity according as the manna made uſe of was leſs or more pure.

Manna, in doſes of an ounce and upwards, proves a gentle laxative: it operates in general with great mildneſs, ſo as to be ſafely given in inflammatory or acute diſtempers, where the ſtimulating purgatives have no place. It is particularly proper in ſtomachic coughs, or thoſe which have their origin in the ſtomach; the manna, by its ſweetneſs and unctuoſity, contributing to obtund as well as to evacuate the offending humours: in this intention it is ſometimes made into a linctus or lohoch, with equal quantities of oil of almonds and of ſyrup of violets. In ſome conſtitutions, however, it acts unkindly, eſpecially if given in conſiderable quantity, occaſioning flatulencies, gripes, and diſtenſions of the belly; inconveniences which may be generally obviated by a ſmall addition of ſome grateful aromatic. It does not produce the full effect of a cathartic, unleſs taken in large doſes, as two ounces or more, and hence is rarely employed in this intention by itſelf: it may be commodiouſly diſſolved in the purging mineral waters, or acuated with the cathartic ſalts, or other purgatives: its efficacy is ſaid to be peculiarly promoted by caſia fiſtularis, a mixture of the two purging more than both of them ſeparately. See *Caſia*.

MARGARITÆ.

PERLÆ. Uniones. Pearls: ſmall calculous concretions, of a bright ſemitranſparent whiteneſs, found on the inſide of the ſhell of the *concha margaritifera* or mother-of-pearl fiſh, as alſo of certain oyſters and other ſhell-fiſhes. The fineſt pearls are brought from the Eaſt and

Weſt

Weſt Indies: the oriental, which are moſt eſteemed, have a more ſhining ſilver-like hue than the occidental, which laſt are generally ſomewhat milky: an inferiour ſort is ſometimes met with in the ſhell-fiſhes of our own ſeas, particularly on the coaſts of Scotland. The coarſe rough pearls, and the very ſmall ones which are unfit for ornamental uſes, called *rag pearl* and *ſeed pearl*, are thoſe generally employed in medicine.

It is ſaid, that counterfeit pearls are often brought from China, made of pellets of clay coated with the white matter of oyſter-ſhells. The clay may be diſtinguiſhed by its acquiring an additional hardneſs in the fire, and reſiſting acids; whereas the true pearls calcine in the fire, and become quicklime, and readily diſſolve in acids; the vitriolic excepted, which precipitates them when previouſly diſſolved by other acids.

Theſe properties of the pearl, ſhew that it is an earth of the ſame kind with crabs-claws, oyſter-ſhells, and the other calcareous animal abſorbents. It has no other virtues than thoſe of the other ſubſtances of this claſs, and does not poſſeſs thoſe virtues in any greater degree than the common teſtacea.

MARRUBIUM.

MARRUBIUM Pharm. Edinb. Marrubium album Pharm. Lond. & C. B. Marrubium vulgare Linn. WHITE HOREHOUND: a hoary plant, with ſquare ſtalks, and roundiſh wrinkled indented leaves, ſet in pairs on long pedicles; in the boſoms of which come forth thick cluſters of whitiſh labiated flowers, in ſtriated cups, whoſe diviſions terminate in ſharp points or prickles.

prickles. It is perennial, grows wild in uncultivated grounds, and flowers in June.

The leaves of horehound have a moderately ſtrong ſmell, of the aromatic kind, but not agreeable, which by drying is improved, and in keeping for ſome months is in great part diſſipated: their taſte is very bitter, penetrating, diffuſive, and durable in the mouth. From theſe qualities, and their ſenſible operation, when taken in any conſiderable doſes, of looſening the body, it may be preſumed that this herb is a medicine of ſome efficacy, and has no ill claim to the corroborant and aperient virtues, for which it is recommended, in humoural aſthmas, and in menſtrual ſuppreſſions, cachexies, and other chronical diſorders proceeding from a viſcidity of the fluids and obſtructions of the viſcera: a dram of the dry leaves in powder, or two or three ounces of the expreſſed juice, or an infuſion of half a handful or a handful of the freſh leaves, are commonly directed for a doſe. The dry herb gives out its virtue both to watery and ſpirituous menſtrua, tinging the former of a browniſh, the latter of a green colour: on inſpiſſating the watery infuſion, the ſmell of the horehound wholly exhales, and the remaining extract proves a ſtrong and almoſt flavourleſs bitter: rectified ſpirit carries off likewiſe greateſt part of the flavour of the herb, leaving an extract in leſs quantity than that obtained by water, and of a more penetrating bitterneſs.

* The juices of horehound and plantain mixed are a remedy of great repute in America againſt the bite of the rattle-ſnake. They are adminiſtered by ſpoonfuls at ſhort intervals; while at the ſame time the wounded part is covered with a cataplaſm

a cataplaſm of the ſame herbs bruiſed. The good effects are ſaid to be ſpeedy, and the recovery of the patient complete and certain.

MARUM.

MARUM SYRIACUM Pharm. Lond. Majorana ſyriaca vel cretica C. B. Marum cortuſi J. B. Chamædrys maritima incana frutescens foliis lanceolatis Tourn. Origanum Syriacum Linn. MARUM, SYRIAN HERB-MASTICH: a low ſhrubby plant, with ſmall oval leaves, pointed at each end, ſet in pairs, without pedicles, of a dilute green colour above, and hoary underneath: in their boſoms appear ſolitary, purple, labiated flowers, wanting the upper lip; the lower lip is divided into five ſegments, the middlemoſt of which is larger than the reſt, and hollowed like a ſpoon: each flower is followed by four roundiſh ſeeds incloſed in the cup. It is ſaid to be a native of Syria, and of one of the Hieres iſlands, on the coaſt of Provence: in our climate it does not well bear ſevere winters without ſhelter.

THE leaves of marum have a bitteriſh, aromatic, very pungent taſte; and when rubbed a little, yield a quick piercing ſmell, which provokes ſneezing. They have been chiefly made uſe of as an ingredient in ſternutatory powders, though, from their ſenſible qualities, they promiſe to be applicable to more important purpoſes, and to have no ill title to the ſtimulating, attenuating, deobſtruent, antiſeptic virtues aſcribed to them by Wedelius in a diſſertation on this plant: they ſeem particularly well adapted as an ingredient in the volatile oily aromatic ſpirits with which their agreeable pungency in a great degree coincides.

The

The marum loſes but little of its pungency on being dried, and in this reſpect it differs remarkably from many other acrid herbs, as thoſe called antiſcorbutic. It gives out its active matter partially to water, and completely to rectified ſpirit: the watery infuſions, in colour yellow, though pretty ſtrongly impregnated with the ſmell of the marum, have only a weak taſte: the ſpirituous tinctures, in colour yellowiſh-green, are ſtrongly impregnated with the taſte, but have the ſmell in great meaſure covered by the menſtruum. Diſtilled with water, it yields a highly pungent, ſubtile, volatile eſſential oil, ſimilar to that of ſcurvygraſs, but ſtronger, and of a leſs periſhable pungency: the remaining decoction is little other than bitteriſh. Rectified ſpirit carries off likewiſe, in the inſpiſſation of the ſpirituous tincture, a conſiderable ſhare of the ſmell and pungency of the marum, but leaves much the greateſt part concentrated in the extract; which, on being taſted, fills the mouth with a durable, penetrating, glowing warmth.

MARUM VULGARE.

SAMPSUCUS ſive marum maſtichen redolens C. B. Thymbra hiſpanica majoranæ folio Tourn. Clinopodium quibuſdam, maſtichina gallorum J. B. Thymus maſtichina Linn. COMMON HERB-MASTICH: a low ſhrubby plant, with ſmall oblong leaves, pointed at both ends, ſet in pairs, without pedicles: at the tops of the branches ſtand woolly heads, containing ſmall white labiated flowers, whoſe upper lip is erect and cloven, the lower divided into three ſegments: each flower is followed by four ſeeds incloſed in the cup. It grows ſpontaneouſly on dry

dry gravelly grounds in Spain, and in the like soils it bears the ordinary winters of our own climate.

THIS plant is employed chiefly, like the foregoing, as an errhine. It is considerably pungent, though far less so than the *marum syriacum*; and of a strong agreeable smell, somewhat resembling that of mastich.

MASTICHE.

MASTICHE Pharm. Lond. & Edinb. MASTICH: concrete resin, obtained in the island Chio from the lentisk tree; brought over in small yellowish transparent brittle grains or tears. From transverse incisions made in the bark of the tree, about the beginning of August, the resin exudes in drops, which running down, and concreting on the ground, are thence swept up *(a)*. The tree is raised also in several parts of Europe; but no resin has been observed to issue from it in these climates: nor do all the trees of this species, in the island Chio itself, afford this commodity.

THIS resin has a light agreeable smell, especially when rubbed or heated: in chewing, it first crumbles, soon after sticks together, and becomes soft and white like wax, without impressing any considerable taste. It totally dissolves, except the earthy impurities, which are commonly in no great quantity, in rectified spirit of wine, and then discovers a degree of warmth and bitterness, and a stronger smell than that of the resin in substance: the colour

(a) Tournefort, *Voyages to the Levant*, *vol.* i. *p.* 287.

of

of the ſolution is a pale yellow. Boiled in water, it impregnates the liquor with its ſmell, but gives out little or nothing of its ſubſtance; diſtilled with water, it yields a ſmall proportion of a limpid eſſential oil, in ſmell very fragrant, and in taſte moderately pungent. Rectified ſpirit brings over alſo, in diſtillation, the more volatile odorous matter of the maſtich.

Maſtich is recommended, in doſes of from half a ſcruple to half a dram, as a mild corroborant and reſtringent, in old coughs, hemoptyſes, diarrhœas, weakneſs of the ſtomach, &c. It is given either in ſubſtance, divided by other materials; or diſſolved in ſpirit and mixed with ſyrups: or diſſolved in water into an emulſion by the intervention of gum-arabic or almonds: the decoctions of it in water, which ſome have directed, have little or nothing of the virtue of the maſtich. It is ſaid that this reſin is commonly employed as a maſticatory, in Chio and among the Turkiſh women, for ſweetening the breath, and ſtrengthening the gums and teeth; and that when thus uſed, by procuring a copious excretion of ſaliva, it proves ſerviceable in catarrhous diſorders.

MATRICARIA.

MATRICARIA vulgaris ſeu ſativa C. B. Febrifuga Dorſten. Matricaria Parthenium Linn. FEVERFEW: a plant with firm branched ſtalks, and roughiſh leaves, each of which is compoſed of two or three pairs of indented oval ſegments ſet on a middle rib, with an odd one at the end, cut into three lobes: the flowers ſtand on the tops in the form of an umbel, conſiſting, each, of a number of ſhort white petala, ſet round a yellow diſk, which is followed by ſmall ſtriated

ſtriated ſeeds. It is biennial, or of longer duration; grows wild in hedges and uncultivated places, and flowers in June.

THE leaves and flowers of feverfew have a ſtrong, not agreeable ſmell, and a moderately bitter taſte; both which they communicate, by warm infuſion, to water and to rectified ſpirit. The watery infuſions, inſpiſſated, leave an extract of conſiderable bitterneſs, and which diſcovers alſo a ſaline matter, both to the taſte, and in a more ſenſible manner, by throwing up to the ſurface ſmall cryſtalline efflorescences in keeping: the peculiar flavour of the matricaria exhales in the evaporation, and impregnates the diſtilled water: on diſtilling large quantities of the herb, a yellowiſh ſtrong-ſcented eſſential oil is found floating on the ſurface of the water. Rectified ſpirit carries off but little of the flavour of this plant in evaporation or diſtillation: the ſpirituous extract is far ſtronger in taſte than that made with water, and more agreeable in ſmell than the herb itſelf. The quantity of ſpirituous extract, according to Cartheuſer's experiments, is only about one ſixth the weight of the dry leaves, whereas the watery extract amounts to near one half.

This herb is recommended as a warm, aperient, carminative bitter; and ſuppoſed to be particularly ſerviceable in female diſorders. It appears, from the above analyſis, to be a medicine of no inconſiderable virtue, in ſome degree ſimilar to camomile.

MECHOACANNA.

BRYONIA MECHOACANNA alba C. B. Convolvulus americanus mechoacan dictus Raii. Jalappa

Jalappa alba. Rhabarbarum album quibuſdam. MECHOACAN: the root of an American convolvulus, *(Convolvulus Mechoacanna Linn.)* brought chiefly from a province in Mexico of the ſame name, in thin tranſverſe ſlices, like jalap, but larger and whiter.

THIS root was firſt introduced, about the year 1524, and continued in eſteem for a conſiderable time, as a mild cathartic, of very little taſte or ſmell, not liable to offend the ſtomach, of ſlow operation, but effectual and ſafe: by degrees, it gave place to jalap, which has now, among us, almoſt wholly ſuperſeded its uſe. It ſeems to differ from jalap only in being weaker: the reſins obtained from the two roots appear to be of the ſame qualities, but mechoacan ſcarcely yields one ſixth part ſo much as jalap does, and hence requires to be given in much larger doſes to produce the ſame effects. The doſe of the mechoacan in ſubſtance is from one dram to two or more.

M E L.

MEL Pharm. Lond. HONEY: a ſweet vegetable juice: collected by the bee from the flowers of different plants, and depoſited in the cells of the combs; from which it is extracted, either by ſpontaneous percolation through a ſieve in a warm place, or by expreſſion. That which runs ſpontaneouſly is purer than the expreſſed; a quantity of the waxy and other impurities being forced out along with it by the preſſure, eſpecially when the combs are previouſly heated. The beſt ſort of honey is of a thick conſiſtence, a whitiſh colour, an agreeable ſmell, and a very pleaſant taſte: both the colour

colour and flavour are said to differ in some degree according to the plants which the bees collect it from.

Honey, exposed to a gentle heat, as that of a water bath, becomes thin, and throws up to the surface its waxy impurities, together with the meal or flower sometimes fraudulently mingled with it, which may thus be separated by despumation, so as to leave the honey pure. On continuing the heat, there rises a considerable quantity of aqueous fluid, impregnated with the fine smell of the honey: the inspissated residuum, like the honey at first, dissolves both in water and in rectified spirit, and promotes the union of oily and resinous substances with watery liquors. By treating the inspissated mass with moist clay, as practised by the sugar-bakers for purifying sugar from its unctuous treacly matter, the unctuous parts of honey may in like manner be separated, and its pure sweet matter obtained in the form of a solid, saline, white concrete.

This juice is an useful sweet, for medicinal as well as domestic purposes; more aperient and detergent than the simpler sweet prepared from the sugar cane; particularly serviceable for promoting expectoration in disorders of the breast, and as an ingredient in cooling and detergent gargarisms. For these, and other similar intentions, it is sometimes mixed with vinegar, in the proportion of about two pounds to a pint, and the mixture boiled down to the consistence of a syrup; sometimes impregnated with the virtues of different vegetables, by boiling it in like manner with their juices or infusions, till the watery parts of the juice or infusion have exhaled and left the active matter

Oxymel simplex *Ph. Lond.*

incorporated with the honey. It excellently covers the taſte of purging ſalts and waters. The boiling of honey, though it diſſipates great part of its odorous matter, and thus proves in ſome caſes injurious to it, is in ſome caſes alſo of advantage: there are particular conſtitutions with which honey remarkably diſagrees, and in which even very ſmall quantities occaſion gripes, purging, and great diſorder: by boiling, it loſes of that quality by which it produces theſe effects.

* The Edinburgh college ſeem at preſent of opinion that honey has no qualities which render it in any caſe preferable to ſugar; ſince they have entirely expunged it, and all preparations in which it entered, from their laſt pharmacopœia *(a)*.

MELILOTUS.

MELILOTUS officinarum germaniæ C. B. Lotus ſilveſtris. Trifolium odoratum. Trifolium Melilotus officinalis Linn. MELILOT: a plant with ſmooth oval ſtriated leaves, ſtanding three together, on ſlender pedicles; and round, ſtriated, branched ſtalks, terminated by long ſpikes of papilionaceous flowers drooping downwards, which are followed by ſhort thick wrinkled pods, containing, each, one or two roundiſh ſeeds. It is annual or biennial, and found in flower, in hedges and corn fields, greateſt part of the ſummer.

MELILOT has been ſaid to be reſolvent, emollient, anodyne, and to participate of the virtues of camomile. In its ſenſible qualities, it differs

(a) It is preſerved, perhaps from inattention, in the *Electuarium Thebaicum Pharm. Edinb.*

very

very materially from that plant: its taſte is unpleaſant, ſubacrid, ſubſaline, but not bitter: when freſh, it has ſcarcely any ſmell; in drying, it acquires a pretty ſtrong one, of the aromatic kind, but not agreeable. Linnæus obſerves, in the third volume of the *Amænitates Academicæ*, that diſtilled water of melilot, of little ſmell itſelf, remarkably heightens the fragrance of other ſubſtances. The principal uſe of this plant has been in glyſters, fomentations, and other external applications: it formerly gave name to one of the officinal plaſters; which received from the melilot a green colour and an unpleaſant ſmell, without any addition to its efficacy.

MELISSA.

MELISSA Pharm. Lond. & Edinb. Meliſſa hortenſis C. B. Melyſſophyllum, mellifolium, mellitis, citrago, citraria, cedronella, apiaſtrum. Meliſſa officinalis Linn. Balm: a plant with ſquare ſtalks; and oblong, pointed, dark green, ſomewhat hairy leaves, ſet in pairs; in the boſoms of which come forth pale reddiſh labiated flowers, ſtanding ſeveral together on one pedicle, with the upper lip roundiſh, erect, and cloven, and the lower divided into three ſegments. It is perennial; a native of mountainous places in the ſouthern parts of Europe; and flowers in our gardens in June.

This plant, formerly celebrated for cephalic, cordial, ſtomachic, uterine, and other virtues, is now juſtly ranked among the milder corroborants. It has a pleaſant ſmell, ſomewhat of the lemon kind, and a weak aromatic taſte; of both which it loſes a conſiderable part on being dried;

a slight roughishness, which the fresh herb is accompanied with, becoming at the same time more sensible. Infusions of the leaves in water, in colour greenish or reddish brown according to the degree of saturation, smell agreeably of the herb, but discover no great taste, though, on being inspissated, they leave a considerable quantity of bitterish and somewhat austere extract: the infusions are sometimes drank as tea in chronical disorders proceeding from debility and relaxation, and sometimes acidulated with lemon juice for a diluent in acute diseases. On distilling the fresh herb with water, it impregnates the first runnings pretty strongly with its grateful flavour: when large quantities are subjected to the operation at once, there separates, and rises to the surface of the aqueous fluid, a small portion of essential oil, in colour yellowish, of a very fragrant smell, apparently of great medicinal activity, commended by Hoffman as an excellent corroborant of the nervous system. Tinctures of the newly-dried leaves made in rectified spirit, in colour blackish green, discover less of the balm smell than the watery infusions, but have its taste in a greater degree: inspissated, they leave an extract in somewhat less quantity than that obtained by water, in taste stronger, and which retains a considerable share of the specific smell and flavour of the balm, but is less agreeable than the herb in substance.

MENTHA.

MINT: a perennial herb; with square stalks; serrated leaves set in pairs; and spikes of monopetalous flowers, each of which is cut into four sections, and followed by four seeds inclosed in the cup.

1. MENTHA

1. MENTHA SATIVA *Pharm. Lond. & Edinb. Mentha anguſtifolia ſpicata C. B. Mentha viridis Linn.* Mint, hartmint, ſpearmint: with oblong, narrow, pointed leaves, joined cloſe to the ſtalk; and ſmall purpliſh flowers ſtanding in long ſpikes on the tops. It is a native of the warmer climates, common in our gardens, and flowers in June and July.

THIS herb has a ſtrong agreeable aromatic ſmell, and a bitteriſh, roughiſh, moderately warm taſte. It is in general uſed as a reſtringent ſtomachic and carminative: in vomitings and weakneſs of the ſtomach, there are, perhaps, few ſimples of equal efficacy. Some report that it prevents the coagulation of milk, and hence recommend it to be uſed along with milk diets, and even in cataplaſms and fomentations for reſolving coagulated milk in the breaſts: upon experiment, the curd of milk, digeſted in a ſtrong infuſion of mint, could not be perceived to be any otherwiſe affected than by common water, but milk, in which mint leaves were ſet to macerate, did not coagulate near ſo ſoon as an equal quantity of the ſame milk kept by itſelf.

The leaves are ſometimes taken in ſubſtance, beaten with thrice their weight of fine ſugar into a conſerve. Moderately bruiſed, they yield upon expreſſion about two thirds their weight of a turbid, brown-coloured, ſomewhat mucilaginous juice; which is commonly ſuppoſed to retain the full virtues of the mint, but which, though participating of the bitterneſs and ſubaſtringency of the herb, is found to have little or nothing of the peculiar aromatic flavour in which the principal virtue of this plant reſides. The leaves loſe in drying about three fourths

of their weight, without ſuffering much loſs of their ſmell or taſte; nor is the ſmell ſoon diſſipated by moderate warmth, or impaired in keeping.

Cold water, by maceration for ſix or eight hours on the dry herb, and warm water in a ſhorter time, become richly impregnated with its flavour: if the maceration be long continued, the groſſer parts of the mint are extracted, and the liquor proves leſs grateful: on boiling the mint in water till the aromatic matter is diſſipated, the remaining dark-brown liquor is found nearly ſimilar to the recent juice; unpleaſant, bitteriſh, ſubaſtringent, and mucilaginous. By diſtillation, a pound and a half of the dry leaves communicate a ſtrong impregnation to a gallon of water: † the diſtilled water proves rather more elegant if drawn from the freſh plant in the proportion of ten pints from three pounds ‡ than from the dry plant, though the latter is frequently made uſe of as being procurable at all times of the year. Along with the aqueous fluid, an eſſential oil diſtils, of a pale yellowiſh colour, changing by age to a reddiſh, and at length to a dark red, in quantity near an ounce from ten pounds of the freſh herb in flower, ſmelling and taſting ſtrongly of the mint, but ſomewhat leſs agreeable than the herb itſelf.

Aq. menthæ ſativ. *Ph. Lond.* †
Ph. Ed. ‡
Ol. menthæ ſativ. eſſentiale *Ph. Lond. & Ed.*

Dry mint, digeſted in rectified ſpirit, either in the cold, or with a gentle warmth, gives out readily its peculiar taſte and ſmell, without imparting the groſſer and more ungrateful matter, though the digeſtion be long continued. The tincture appears by day-light of a fine dark green, by candle-light of a bright red colour: a tincture extracted from the remaining mint by freſh ſpirit appears in both lights green:

the

the colour of both tinctures changes, in keeping, to a brown. On gently inſpiſſating the filtered tinctures, little or nothing of their flavour riſes with the ſpirit: the remaining extract poſſeſſes the concentrated virtues of about ten times its weight of the dry herb; and differs from the products obtained by diſtillation with water, in this, that the bitterneſs and ſubaſtringency of the mint, which are there ſeparated from the aromatic part, are here united with it.

Proof ſpirit extracts the ſmell and taſte of mint, but not its green colour. The tincture is brown, like the watery infuſions; and, like them alſo, it becomes ungrateful, if the digeſtion is long continued. On gentle diſtillation, the more ſpirituous portion, which riſes at firſt, diſcovers little flavour of the mint; but as ſoon as the watery part begins to diſtil, the virtues of the mint come over plentifully with it. Hence the officinal ſpirituous water, prepared by drawing off a gallon of proof ſpirit from a pound and a half of the dried leaves, proves ſtrongly impregnated with the mint.

Spiritus menthæ ſativæ *Ph. Lond.*

After mint has been repeatedly infuſed in water, rectified ſpirit ſtill extracts from it a green tincture, and a ſenſible flavour of mint: on the other hand, ſuch as has been firſt digeſted in ſpirit, gives out afterwards to water a brown colour, and a kind of nauſeous mucilaginous taſte very different from that which diſtinguiſhes mint. The ſpirituous tinctures mingle with watery liquors without precipitation or turbidneſs; but ſpirituous liquors impregnated with its pure volatile parts by diſtillation, turn milky on the admixture of water.

2. MENTHA AQUATICA *ſive Mentaſtrum Pharm. Pariſ. Mentha aquatica ſive ſiſymbrium J. B. Mentha rotundifolia paluſtris ſive aquatica major C. B. Mentha aquatica Linn.* Water-mint: with ſomewhat oval leaves ſet on pedicles, and long ſtamina ſtanding out from the flowers.

3. MENTASTRUM HIRSUTUM: *Auricularia officinarum Dale: Mentha paluſtris folio oblongo C. B.* Hairy water-mint: with long hairy leaves having no pedicles; and broad ſpikes of flowers.

BOTH theſe plants grow wild in moiſt meadows, marſhes, and on the brinks of rivers, and flower towards the end of ſummer. They are leſs agreeable in ſmell than the ſpearmint, and in taſte bitterer and more pungent: the ſecond ſort approaches in ſome degree to the flavour of pennyroyal. They yield a much ſmaller proportion of eſſential oil: from twenty pounds of the water-mint were obtained ſcarcely three drams. With regard to their virtues, they appear to partake of thoſe of ſpearmint; to which they are obviouſly far inferiour as ſtomachics. The hairy water-mint is ſuppoſed to be the *auricularia, planta zeylanica*, or earwort, celebrated by Marloe for the cure of deafneſs: though probably not more effectual againſt that complaint, than the other water-mint againſt nephritic ones, in which it is ſaid to have been formerly an empyrical ſecret *(a)*.

4. MENTHA PIPERITIS *Pharm. Lond. & Edinb. Mentha ſpicis brevioribus & habitioribus, foliis*

(a) In the firſt volume of Linnæus's *Amœnitates Academicæ*, the auricularia is ſaid to be not at all of the mint kind, but a ſtellated plant, akin to galium.

menthæ

menthæ fuſcæ, ſapore fervido piperis Raii ſynopſ. Mentha piperita Linn. Pepper-mint: with acuminated leaves on very ſhort pedicles; and the flowers ſet in ſhort thick ſpikes or heads. It is a native of this kingdom; and, ſo far as is known, of this kingdom only: it is much leſs common, however, than the other wild mints; but having been of late received in general practice as a medicine, it is now raiſed plentifully in gardens, and does not appear, like many of the other plants that grow naturally in watery places, to loſe any thing of its virtue with this change of ſoil.

THIS ſpecies has a more penetrating ſmell than any of the other mints; and a much ſtronger and warmer taſte, pungent and glowing like pepper, and ſinking as it were into the tongue. It is a medicine of great importance in flatulent colics, hyſteric depreſſions, and other like complaints; exerting its activity as ſoon as taken into the ſtomach, and diffuſing a glowing warmth through the whole ſyſtem; yet not liable to heat the conſtitution near ſo much as might be expected from the great warmth and pungency of its taſte.

By maceration or infuſion, it readily and ſtrongly impregnates both water and ſpirit with its virtue; tinging the former of a browniſh colour, and the latter of a deeper green than the other mints. In diſtillation with water, it yields a conſiderable quantity of eſſential oil, of a pale greeniſh yellow colour, growing darker coloured by age, very light, ſubtile, poſſeſſing in a high degree the ſpecific ſmell and penetrating pungency of the pepper-mint*(a): the decoction

Ol. eſſentiale menthæ piperitidis *Ph. Lond. & Ed.*

*(a) Some particles of a true camphor were procured from dried pepper-mint by cohobation. *Gaubii Adverſar.*

remaining

remaining after the ſeparation of this active principle, is only bitteriſh and ſubaſtringent, like thoſe of the other mints. Rectified ſpirit, drawn off with a gentle heat from the tincture made in that menſtruum, brings over little of the virtue of the herb, nearly all its pungency and warmth remaining concentrated in the extract, the quantity of which amounts to about one fourth of the dried leaves. A ſimple and a ſpirituous diſtilled water, drawn in the ſame proportions as thoſe of ſpearmint, and the eſſential oil, are kept in the ſhops.

Aq. menthæ piperit. *Ph. Lond. & Ed.*
Aq. menthæ piperit. ſpirituoſa *Ph. Ed.*
Spir. menthæ piper. *Ph. Lond.*

MERCURIALIS.

HERB-MERCURY: a plant with oblong, acuminated, indented leaves, ſtanding in pairs: in their boſoms come forth, either ſpikes of imperfect flowers, ſet in three-leaved cups, falling off without any ſeeds; or little rough balls, joined two together, including each a ſingle ſeed.

1. MERCURIALIS *teſticulata ſive mas, & mercurialis ſpicata ſive femina dioſcoridis & plinii C. B. Mercurialis annua Linn.* French mercury: with ſmooth gloſſy leaves, and branched ſtalks. The flowering plants, called female, and thoſe which produce ſeeds, called male, are both annual, and grow wild together in ſhady uncultivated grounds.

The leaves of this plant have no remarkable ſmell, and very little taſte: when freed by exſiccation from the aqueous moiſture, with which they abound, their prevailing principle appears to be of the mucilaginous kind, with a ſmall admixture of ſaline matter. They are ranked among the emollient oleraceous herbs, and ſaid to

to gently looſen the belly: their principal uſe has been in glyſters.

2. CYNOCRAMBE: *Mercurialis montana teſticulata & ſpicata C. B. Mercurialis perennis Linn.* Dogs mercury, male and female: with rough leaves and unbranched ſtalks. It is perennial, and grows wild in woods and hedges.

This ſpecies has been ſaid by ſome to be ſimilar in quality to the foregoing, and to be more acceptable to the palate as an oleraceous herb: it has lately however been found to be poſſeſſed of noxious qualities, acting as a virulent narcotic. An inſtance is related in N°. 203 of the Philoſophical Tranſactions, of its ill effects on a family, who eat at ſupper the herb boiled and fried: the children, who were moſt affected by it, vomited, purged, and fell faſt aſleep: two ſlept about twenty-four hours, then vomited and purged again, and recovered: the other could not be waked for four days, and then opened her eyes and expired.

MEUM.

MEUM ATHAMANTICUM. Meum foliis anethi C. B. Meu & athamanta & radix urſina quibuſdam. Æthuſa Meum Linn. SPIGNEL, BAULDMONY: an umbelliferous plant, with buſhy leaves divided into ſlender ſegments, like thoſe of fennel, but finer; producing large, oblong, ſtriated ſeeds, flat on one ſide, and convex on the other: the root is long, variouſly branched, with generally a number of hairs or filaments at top, which are the remains of the ſtalks of former years, of a browniſh colour on the outſide, pale or whitiſh within, when dried of a fungous texture. It is perennial, grows wild

wild in meadows in ſome of the mountainous parts of England, and flowers in June.

The root of ſpignel, recommended as a carminative, ſtomachic, and for attenuating viſcid humours, appears to be nearly of the ſame nature with that of lovage; differing, in its ſmell being rather more agreeable, ſomewhat like that of parſneps, but ſtronger, and in its taſte being leſs ſweet and more warm or acrid. The difference betwixt the two roots is moſt conſiderable in the extracts made from them by water; the extract of ſpignel root being unpleaſantly bitteriſh, with little or nothing of the ſweetneſs of that of lovage roots. The ſpirituous extract of ſpignel, more aromatic than that of the lovage, is moderately warm, bitteriſh, and pungent.

MILLEFOLIUM.

MILLEFOLIUM Pharm. Edinb. Millefolium vulgare album, & millefolium purpureum C. B. Achillea, Myriophyllon, Chiliophyllon, Militaris herba, Stratiotes, Carpentaria, Lumbus veneris, & Supercilium veneris. Achillæa Millefolium Linn. Milfoil or Yarrow: a plant with rough ſtiff leaves, divided into ſmall ſegments, ſet in pairs along a middle rib like feathers: the little flowers ſtand thick together in form of an umbel on the top of the ſtiff ſtalk, and conſiſt each of ſeveral whitiſh or pale purpliſh petala ſet round a kind of looſe diſk of the ſame colour, followed by ſmall crooked ſeeds. It is perennial, grows plentifully by the ſides of fields and on ſandy commons, and is found in flower greateſt part of the ſummer.

The

THE leaves and flowers of milfoil are greatly recommended by ſome of the German phyſicians *(a)* as mild corroborants, vulneraries, and antiſpaſmodics, in diarrhœas, hemorrhagies, hypochondriacal and other diſorders. They promiſe, by their ſenſible qualities, to be of no inconſiderable activity. They have an agreeable though weak aromatic ſmell, and a bitteriſh, roughiſh, ſomewhat pungent taſte. The leaves are chiefly directed for medicinal uſe, as having the greateſt bitteriſhneſs and auſterity: the flowers have the ſtrongeſt and moſt ſubtile ſmell, are remarkably acrid, and promiſe to be of moſt efficacy, if the plant has really any ſuch efficacy as an anodyne or antiſpaſmodic. Dr. Grew obſerves, that the young roots have a glowing warm taſte, approaching to that of contrayerva, and thinks they might in ſome meaſure ſupply its place; but adds, that they loſe much of their virtue in being dried *(b)*, from whence it may be preſumed that their active matter is of another kind.

The virtue of the leaves and flowers is extracted both by watery and ſpirituous menſtrua: the aſtringency moſt perfectly by the former, their aromatic warmth and pungency by the latter, and both of them equally by a mixture of the two. The flowers, diſtilled with water, yield a penetrating eſſential oil, poſſeſſing the flavour of the milfoil in perfection, though rather leſs agreeable than the flowers themſelves, in conſiſtence ſomewhat thick and tenacious, in colour remarkably variable, ſometimes of a

(a) Stahl, *Diſſert. de therapeia paſſionis hypochondriacæ.* Hoffman, *De præſtantia remed. domeſt.* § 18.

(b) Idea of philoſ. hiſt. of plants, § 29. *Of diverſities of taſtes, chap.* v. § 2.

greeniſh

greeniſh yellow, ſometimes of a deep green, ſometimes of a bluiſh green, and ſometimes of a fine blue: theſe differences ſeem to depend in great meaſure on the ſoil in which the plant is produced; the flowers gathered from moiſt rich grounds yielding generally a blue oil; whereas thoſe, which are collected from dry commons, afford only, ſo far as I have obſerved, a green one with a greater or leſs admixture of yellow: the decoction remaining after the ſeparation of this volatile principle, leaves, on being inſpiſſated, a dark browniſh maſs, ungratefully auſtère, bitteriſh, and ſomewhat ſaline. On inſpiſſating the yellowiſh tincture made in rectified ſpirit, ſcarcely any thing of the flavour of milfoil exhales or diſtils with the menſtruum: the remaining deep yellow extract is more agreeable in ſmell than the flowers themſelves, of a moderately warm penetrating taſte, ſomewhat like that of camphor, but much milder, accompanied with a ſlight bitteriſhneſs and ſubaſtringency.

MILLEPEDÆ.

MILLEPEDÆ Pharm. Lond. & Edinb. Centipedes & oniſci quibuſdam. Oniſcus Aſellus Linn. MILLEPEDES, WOOD-LICE: an oblong inſect, with fourteen feet, and its body compoſed of fourteen rings, rolling itſelf up into a round ball on being touched; found in cellars, and under ſtones and logs of wood in cold moiſt places; rarely met with in the warmer climates. Two ſorts are commonly uſed indiſcriminately; one large, of a duſky bluiſh-black or livid colour; the other ſmaller, flatter, thinner, of a pale browniſh grey, and differing alſo from the former in the laſt diviſion of the body being not annular,

annular, but pointed, and in the tail being forked. The first species is said to be the true officinal sort, though some have preferred the second: but there does not seem to be any material difference between them in quality.

Millepedes have a faint disagreeable smell, and a somewhat brackish, sweetish, unpleasant taste. They are celebrated as resolvents, aperients, and diuretics; in jaundices, asthmas, scrophulous and other disorders; but that their virtues are so great as they are generally supposed to be, may be justly questioned, at least when given in the customary doses. I have known two hundred taken every day for some time together, without producing any remarkable effect; in large doses, indeed, it is probable that their activity may be considerable; as they are said to have sometimes produced an universal heat and thirst with a pain in the region of the pubes *(a)*, and sometimes a scalding of urine *(b)*.

These insects may be commodiously swallowed entire, as they spontaneously contract themselves, on being touched, in the form of a pill. In the shops they are commonly reduced into a powder; for which purpose they are prepared, by inclosing them in a thin canvas cloth, and suspending them over hot spirit of wine in a close vessel, till they are killed by the steam and rendered friable. Of the extraction of their active matter by menstrua, no direct experiments have been made: it is rather by expression, than on the principle of extraction or dissolution, that

Millepedæ præparatæ *Pb. Lond. & Ed.*

(a) Frid. Hoffman, *De mat. med. regn. animal. cap.* 18. *Opera omnia, suppl.* ii. *par.* iii. *p.* 157.

(b) Fuller, *Pharmacopœia extemporanea,* sub *Express. milleped. simp.*

their

their virtues are commonly endeavoured to be obtained in a liquid form; though ſome liquors are generally added previouſly to the expreſſion, partly to improve their virtue for particular intentions, partly to preſerve the animal juice from corruption, and partly to render it more completely ſeparable. The college of Edinburgh directs two ounces of live millepedes to be ſlightly bruiſed, and digeſted for a night in a pint of rheniſh wine, after which the liquor is to be preſſed out through a ſtrainer.

Vinum millepedatum *Ph. Ed.*

MOLDAVICA.

MOLDAVICA ſeu Meliſſa turcica: an Meliſſa americana trifolia odore gravi Tourn. inſt.? Camphoroſma Moriſon. hiſt. ox.? Dracocephalum canarienſe Linn. TURKEY or rather CANARY BALM, commonly called BALM-OF-GILEAD: a plant with ſquare ſtalks, and acuminated leaves, ſlightly and obtuſely indented, ſet generally three on one pedicle: of each three, the end one is largeſt, and the other two are nipt at the bottom on the upper ſide, or do not reach ſo far down their middle ribs on that ſide as on the other: the pedicles ſtand in pairs at the joints, with ſimilar ſets of ſmaller leaves in their boſoms. On the tops come forth thick ſpikes, or heads, of pretty large, reddiſh, labiated flowers; whereof both the upper and lower lip are cut into two parts, and the cup into five. It is perennial, a native of the Canary iſlands, and ſcarcely bears the winters of our climate without ſhelter.

THIS or ſome of the other ſpecies of the Turkey balm, of which there are ſeveral, is greatly commended by Hoffman, for ſtrengthening the tone of the ſtomach, and the nervous ſyſtem:

ſyſtem: in this country, it has not yet been, though it ſeems to have a good claim to be, received among the medicinal plants: infuſions of it may be drank as tea, and are very grateful. The leaves and flowery tops have a fragrant ſmell, ſomewhat reſembling that of balm, but far ſtronger, and approaching to that of the fine balſam from which the plant received its name. Their taſte is likewiſe agreeable, but ſo covered with the aromatic flavour, that its particular ſpecies is not eaſily determined: when the herb is infuſed in water, and the aromatic part diſſipated by inſpiſſating the filtered infuſion, the remaining extract impreſſes on the palate a moderately ſtrong, though only momentary, pungency and bitterneſs. In diſtillation with water, it yields a fragrant eſſential oil. Ol. ſyriæ *Germanis quibuſdam.*

MOSCHUS.

MOSCHUS Pharm. Lond. & Edinb. Musk: an odoriferous, grumous ſubſtance: found in a little bag, ſituated near the umbilical region of an oriental quadruped, which is ſaid by ſome to bear the greateſt reſemblance to the goat, by others to the ſtag kind. The beſt muſk is brought from Tonquin in China, an inferiour ſort from Agria and Bengal, and a ſtill worſe from Ruſſia.

Fine muſk comes over in round thin bladders, generally about the ſize of pigeons eggs, covered with ſhort brown hairs, well filled, and without any aperture or any appearance of their having been opened. The muſk itſelf is dry, with a kind of unctuoſity; of a dark reddiſh brown or ruſty blackiſh colour; in ſmall round grains, with very few hard black clots; perfectly free from any ſandy or other viſible foreign matter.

Chewed, and rubbed with a knife on paper, it looks bright, yellowiſh, ſmooth and free from grittineſs. Laid on a red-hot iron, it catches flame, and burns almoſt intirely away, leaving only an exceeding ſmall quantity of light greyiſh aſhes: if any earthy ſubſtances have been mixed with the muſk, the quantity of the reſiduum will diſcover them.

This concrete has a bitteriſh ſubacrid taſte; and a fragrant ſmell, agreeable at a diſtance, but ſo ſtrong as to be diſagreeable when ſmelt near to, unleſs weakened by a large admixture of other ſubſtances. A ſmall quantity, macerated for a few days in rectified ſpirit of wine, imparts a deep colour, and a ſtrong impregnation to the ſpirit: this tincture, of itſelf, diſcovers but little ſmell, the ſpirit covering or ſuppreſſing the ſmell; but on dilution it manifeſts the full fragrance of the muſk, a drop or two communicating to a quart of wine or watery liquors a rich muſky ſcent. The quantity of liquor which may thus be flavoured by a certain known proportion of muſk, appears to be the beſt criterion of the genuineneſs and goodneſs of this commodity; a commodity, which is not only ſaid to vary in goodneſs according to the ſeaſon of its being taken from the animal *(a)*, but which is oftentimes ſo artfully ſophiſticated, that the abuſes cannot be diſcovered by any external characters, or by any other known means than the degree of its ſpecific ſmell and taſte, which the above experiment affords the moſt commodious method of meaſuring. The rectified ſpirit takes up completely the active matter of the muſk; watery liquors extract it

(a) Strahlenberg, *Deſcript. Ruſſ. Siber. &c. p.* 340.

only

only in part. The shops endeavour to procure an union of its virtues with water by the intervention of sugar and gum arabic: forty grains of musk and a dram of fine sugar are rubbed together, and then a dram of powdered gum arabic is added; to this are poured by degrees six ounces by measure of rose water. But the most elegant of all the liquid preparations of this drug, is the tincture in rectified spirit, which may be occasionally diluted with any watery liquors, like the other spirituous tinctures. This is directed in the Edinburgh pharmacopœia in the proportion of two drams of musk to a pound of spirit. By distillation, water becomes strongly impregnated with the scent of the musk, and seems to elevate all its odoriferous matter; while rectified spirit, on the contrary, brings over little or nothing of it.

Mistura moschata *Pb. Lond.*

Tinct. moschi. *Pb. Ed.*

Musk, a medicine of great esteem in the eastern countries, has lately come into general use among us also, in some nervous disorders: though liable, by its strong impression on the organs of smell, to offend and disorder hysterical persons and constitutions of great sensibility, yet, when taken internally, it is found to abate symptoms of that kind which its smell produces, and to be one of the principal medicines of the antispasmodic class. Dr. Wall relates, that two persons labouring under a subsultus tendinum, extreme anxiety, and want of sleep, occasioned by the bite of a mad dog, were perfectly relieved by two doses of musk of sixteen grains each: that convulsive hiccups, attended with the worst symptoms, were removed by a dose or two of ten grains: but in some cases, where this medicine could not, on account of strong convulsions, be administered by the mouth, it proved of service when injected as a glyster: that he

never met with any perſon, how averſe ſo ever to perfumes, but could take it in the form of a bolus without inconvenience: that under the quantity of ſix grains, he never found much effect from it, but that when given to ten grains and upwards, it produces a mild diaphoreſis, without heating or giving any uneaſineſs, but on the contrary, abating pain and raiſing the ſpirits; and that after the ſweat has begun, a refreſhing ſleep generally ſucceeds *(a)*. This medicine is now received in general practice, in different convulſive diſorders; and its doſe has been increaſed, with advantage, to a ſcruple, and half a dram, every four or ſix hours. It has been tried alſo in ſome maniacal caſes; in which it ſeemed to procure a temporary relief.

MOXA.

MOXA ſive lanugo artemiſiæ japonicæ Pharm. Pariſ. Moxa: a ſoft lanuginous ſubſtance, prepared in Japan, from the young leaves of a ſpecies of mugwort, by beating them, when thoroughly dried, and rubbing them betwixt the hands, till only the fine fibres are left. A like ſubſtance is ſaid, in the German ephemerides, to have been obtained, by treating the leaves of our common mugwort in the ſame manner.

Moxa is celebrated in the eaſtern countries, for preventing and curing many diſorders, by being burnt on the ſkin: a little cone of moxa, laid on the part previouſly moiſtened, and ſet on fire at top, burns down with a temperate glowing heat, and produces a dark coloured

(a) Philoſoph. Tranſact. No. 474.

ſpot,

ſpot, the exulceration of which is promoted by applying a little garlic, and the ulcer either healed up when the eſchar ſeparates, or kept running for a length of time, as different circumſtances may require. A fungous ſubſtance, found in fiſſures of old birch trees, is ſaid to be in common uſe among the Laplanders for the ſame purpoſes *(a)*; and ſome have uſed cotton, impregnated with a ſolution of nitre, and afterwards dried, which anſwers the end as effectually as the moxa of the Japoneſe *(b)*. It is obvious, that all theſe applications are no other than means of producing an exulceration of the ſkin, and its conſequence a drain of humours.

MYROBALANI.

MYROBALANI Pharm. Pariſ. MYROBALANS: dried fruits, of the plum kind, brought from the Eaſt Indies. Five ſorts, produced by different trees, have been diſtinguiſhed in the ſhops.

1. MYROBALANI BELLIRICÆ: *Myrobalani rotundæ belliricæ, arabibus belleregi, &c. C. B.* Belliric myrobalans: of a yellowiſh grey colour, and an irregularly roundiſh or oblong figure, about an inch in length, and three quarters of an inch thick.

2. MYROBALANI CITRINÆ: *Myrobalani teretes citrini bilem purgantes C. B.* Yellow myrobalans: ſomewhat longer than the preceding; with generally five large longitudinal ridges,

(a) Linnæus. *Flora lapponica, p.* 264.

(b) Hagendorn, *Cynoſbatologia, p.* 74.

and as many ſmaller between them; ſomewhat pointed at both ends.

3. MYROBALANI CHEBULÆ: *Myrobalani maximi anguloſi pituitam purgantes, arabibus quebolia, &c. C. B.* Chebule myrobalans: reſembling the yellow in figure and ridges, but larger, of a darker colour inclining to brown or blackiſh, and with a thicker pulp.

4. MYROBALANI EMBLICÆ, *arabibus embelgi, &c. C. B. Myrobalani emblicæ in ſegmentis nucleum habentes anguloſæ J. B.* Emblic myrobalans: of a dark blackiſh grey colour, roundiſh, about half an inch thick, with ſix hexagonal faces opening from one another; the fruit of the *Phyllanthus Emblica* of Linnæus.

5. MYROBALANI INDICÆ: *Myrobalani nigræ octangulares C. B. Myrobalani indicæ nigræ ſine nucleis J. B.* Indian or black myrobalans: of a deep black colour, oblong, octangular, differing from all the others, in having no ſtone, or only the rudiments of one; from whence they are ſuppoſed to have been gathered before maturity.

ALL the myrobalans have an unpleaſant, bitteriſh, very auſtere taſte; and ſtrike an inky blackneſs with ſolution of chalybeate vitriol. They are ſaid to have a gently purgative, as well as an aſtringent and corroborating virtue; and are directed to be given, in ſubſtance from half a dram to four drams, and in infuſion or ſlight decoction from four to twelve drams. It is ſaid alſo, that the fruit in ſubſtance acts barely as a ſtyptic, without exerting its purgative quality; that this laſt is diſcovered only in the infuſions

infuſions (*a*), and that by boiling it is diſſipated or deſtroyed (*b*). A difference of this kind, between the fruit and its infuſions, might be eaſily conceived, if the aſtringency of the myrobalans was not extracted by watery liquors, but the contrary of this was found on trial to be true; the infuſions, decoctions, and the decoctions inſpiſſated to the conſiſtence of an extract, being ſtrongly ſtyptic. In this country, they have long been entire ſtrangers to practice, and are now diſcarded, by the colleges both of London and of Edinburgh, from their catalogue of officinals.

MYRRHA.

MYRRHA Pharm. Lond. & Edinb. MYRRH: a gummy-reſinous concrete juice, of an oriental tree, of which we have no certain account. * Mr. Bruce informs us that it grows ſpontaneouſly in the eaſtern part of Arabia felix, and in that part of Abyſſinia which the Greeks named Troglodytria; and that the Abyſſinian myrrh, which is the leaſt plentiful, is the beſt. The beſt kind is that which flows from deep inciſions of the larger branches, hardening upon the tree. It continues to diſtil every year from the ſame wound; but the myrrh is of an inferiour quality after the firſt, being mixed with foreign impurities, and the decayed juices of the tree. The worſt is that which comes from near the root, or the old trunks (*c*). It comes over in glebes or drops, of various colours and magnitudes: the beſt ſort is ſomewhat tranſparent,

(*a*) Geoffroy, *Tract. de materia medica, tom.* ii. *p.* 332.

(*b*) Benancius, *Declaratio fraudum & errorum apud pharmacopœos, è muſeo Bartholini, p.* 68.

(*c*) *Philoſ. Tranſ.* vol. lxv. *p.* 408.

friable, in ſome degree unctuous to the touch, of an uniform browniſh or reddiſh yellow colour, often ſtreaked internally with whitiſh ſemicircular or irregular veins; of a moderately ſtrong, not diſagreeable ſmell; and a lightly pungent, very bitter taſte, accompanied with an aromatic flavour, but not ſufficient to prevent its being nauſeous to the palate.

There are ſometimes found among it hard ſhining pieces, of a pale yellowiſh colour, reſembling gum-arabic, of no taſte or ſmell: ſometimes maſſes of bdellium, darker coloured, more opake, internally ſofter than the myrrh, and differing from it both in ſmell and taſte: ſometimes an unctuous gummy-reſin, of a moderately ſtrong ſomewhat ungrateful ſmell, and a bitteriſh very durable taſte, obviouſly different both from thoſe of bdellium and myrrh: ſometimes likewiſe, as Cartheuſer obſerves, hard compact dark coloured tears, leſs unctuous than myrrh, of an offenſive ſmell, and a moſt ungrateful bitterneſs, ſo as, when kept for ſome time in the mouth, to provoke reaching, though ſo reſinous, that little of them is diſſolved by the ſaliva. Great care is therefore requiſite in the choice of this drug.

THIS bitter aromatic gummy-reſin is a warm corroborant, deobſtruent, and antiſeptic. It is given from a few grains to a ſcruple and upwards, in uterine obſtructions, cachexies, putrid fevers, &c. and often employed alſo as an external antiſeptic and vulnerary. * In doſes of half a dram, Dr. Cullen remarks that it heated the ſtomach, produced ſweat, and agreed with the balſams in affecting the urinary paſſages. It has lately come more into uſe as a tonic in hectical

hectical cafes, and is faid to prove lefs heating than moft other medicines of that clafs.

Myrrh diffolves almoft totally in boiling water, but as the liquor cools, a portion of refinous matter fubfides. The ftrained folution is of a dark yellowifh colour, fomewhat turbid, fmells and taftes ftrongly of the myrrh, and retains both its taſte, and a conſiderable ſhare of its ſcent, on being inſpiſſated with a gentle heat to the conſiſtence of an extract. By diſtillation with a boiling heat, the whole of its flavour ariſes, partly impregnating the diſtilled water, partly collected and concentrated in the form of an eſſential oil; which is in ſmell extremely fragrant, and rather more agreeable than the myrrh in ſubſtance, in taſte remarkably mild, ſo ponderous as to ſink in the aqueous fluid, whereas the oils of moſt, perhaps of all, of the other gummy-reſins ſwim: the quantity of oil, according to Hoffman's experiments, is about two drams from ſixteen ounces, and when the myrrh is of a very good kind, near three drams.

Rectified ſpirit diſſolves leſs of this concrete than water, but extracts more perfectly that part in which its bitterneſs, flavour, and virtues, reſide: the reſinous matter, which water leaves undiſſolved, is very bitter; but the gummy matter, which ſpirit leaves undiſſolved, is inſipid, the ſpirituous ſolution containing all the active parts of the myrrh. Tinctures of myrrh, made by digeſting three ounces of the concrete in two pounds and a half of rectified † or a pint and a half of proof ‡ ſpirit, with half a pint of rectified, are kept in the ſhops, and given ſometimes internally from fifteen drops to a tea-ſpoonful, but oftener uſed among us externally for cleanſing ulcers and promoting the

Tinct. myrrh.

† *Ph. Ed.*

‡ *Ph. Lond.*

the exfoliation of carious bones: both tinctures are of a reddish yellow colour. In distillation, rectified spirit brings over little or nothing of the flavour of the myrrh: the extract, obtained by inspissating the tincture, is a fragrant, bitter, very tenacious resin, amounting to one third or more of the weight of the myrrh employed.

MYRTUS.

MYRTUS communis italica C. B. Myrtus communis Linn. MYRTLE: an evergreen shrub; with oblong leaves, pointed at both ends; in the bosoms of which spring solitary white pentapetalous flowers, followed by black oblong umbilicated berries full of white crooked seeds. It is a native of the southern parts of Europe, from whence the shops have been usually supplied with the berries, called *myrtilli*, which rarely come to perfection in our climate; nor does the shrub bear our severe winters without shelter.

THE berries of the myrtle, recommended in alvine and uterine fluxes and other disorders from relaxation and debility, appear to be among the milder restringents or corroborants: they have a roughish not unpleasant taste, accompanied with a degree of sweetishness and aromatic flavour. The leaves have likewise a manifest astringency, and yield, when rubbed, a pretty strong aromatic smell, agreeable to most people.

MYRTUS BRABANTICA.

MYRTHUS BRABANTICA Pharm. Paris. Rhus myrtifolia belgica C. B. Gale, frutex odoratus

odoratus ſeptentrionalium, elæagnus Cordo, chamælæagnus Dodonæo J. B. Myrica Gale Linn. GAULE, SWEET WILLOW, DUTCH MYRTLE: a ſmall ſhrub, much branched; with oblong, ſmooth, whitiſh green leaves, ſomewhat pointed or converging at each end; among which ariſe pedicles bearing flowery tufts, and ſeparate pedicles bearing ſcaly cones which include the ſeeds, one little ſeed being lodged in each ſcale. It grows wild in waſte watery places in ſeveral parts of England: in the iſle of Ely it is ſaid to be very plentiful. It flowers in May or June, ripens its ſeeds in Auguſt, and loſes its leaves in winter.

THE leaves, flowers, and ſeeds of this plant, have a ſtrong fragrant ſmell, and a bitter taſte. They are ſaid to be uſed among the common people, for deſtroying moths, and cutaneous inſects, being accounted an enemy to inſects of every kind; internally, in infuſions, as a ſtomachic and vermifuge; and, as a ſubſtitute to hops, for preſerving malt liquors, which they render more inebriating, and of conſequence leſs ſalubrious *(a)*: it is ſaid that this quality is deſtroyed by boiling *(b)*.

NAPUS.

NAVEW: a plant of the turnep kind, with oblong roots growing ſlenderer from the top to the extremity. Two ſorts of it, ranked among the articles of the materia medica, are ſuppoſed by Linnæus to be only varieties, and are therefore joined into one ſpecies, under the name

(a) Ray, *Hiſtoria plantarum, tom.* ii. *p.* 1707.
(b) Linnæi, *Amæn. Academic.* iii. 96.

of

of *braſſica (napus) radice cauleſcente fuſiformi.* They are both biennial.

1. Napus, *dulcis officinarum. Napus ſativa C. B.* Garden or ſweet navew, or French turnep: cultivated for the culinary uſe of its roots, which are warmer and more grateful than thoſe of the common turnep, and are ſaid to afford likewiſe, in their decoctions, a liquor beneficial in diſorders of the breaſt. The ſeeds, in figure roundiſh and in colour reddiſh, are the part principally directed for medicinal purpoſes: they have a moderately pungent taſte, ſomewhat approaching to that of muſtard ſeed, of the virtues of which they appear to partake: with muſtard ſeed they agree alſo in their pharmaceutic properties, their pungent matter being taken up completely by water, and only partially by rectified ſpirit, and being diſſipated in the inſpiſſation of the watery infuſion, only an unpleaſant bitteriſhneſs remaining in the extract. As the navew ſeeds, nearly ſimilar in kind to thoſe of muſtard, are apparently much inferiour in degree, the college of Edinburgh has diſcarded them, and that of London retains them only as an ingredient in theriaca.

2. Bunias *Pharm. Pariſ. Napus ſilveſtris C. B.* Wild navew, or rape: growing on dry banks and among corn: with leaves ſomewhat different from thoſe of the preceding, being more like thoſe of cabbages than of turneps; the root ſmaller, and of a ſtronger unpleaſant taſte; and the ſeeds alſo rather more pungent, on which account they are preferred by the faculty of Paris. The ſeeds of both kinds yield upon expreſſion a large quantity of oil: the oil called rape-oil is extracted from the ſeeds of the wild

wild ſort, which is cultivated in abundance, for that uſe, in ſome parts of England; the cake, remaining after the expreſſion of the oil, retains, like that of muſtard, the acrimony of the ſeeds.

NARDUS CELTICA.

NARDUS CELTICA dioſcoridis C. B. Spica celtica & ſaliunca quibuſdam. Valeriana celtica Tourn. & Linn. CELTIC NARD: a ſmall ſpecies of valerian, with uncut, oblong, obtuſe, ſomewhat oval leaves. It is a native of the Alps, from whence the ſhops have been generally ſupplied with the dried roots, conſiſting of a number of blackiſh fibres, with the lower parts of the ſtalks adhering; which laſt are covered with thin yellow ſcales, the remains of the withered leaves.

THIS root has been recommended as a ſtomachic, carminative, and diuretic: at preſent, it is ſcarcely otherwiſe made uſe of, in this country, than as an ingredient in mithridate and theriaca, though its ſenſible qualities promiſe ſome conſiderable medicinal powers. It has a moderately ſtrong ſmell, of which it is extremely retentive (*a*), and a warm bitteriſh ſubacrid taſte, ſomewhat reſembling thoſe of common wild valerian: an extract made from it by rectified ſpirit has a ſtrong penetrating taſte, and retains in good meaſure the particular flavour, as well as the bitterneſs and pungency of the root.

(*a*) Linnæus obſerves that this plant, in a dry herbal, has retained its fragrance above a century. *Amænitat. Academic. vol.* iii. *p.* 71.

NARDUS

NARDUS INDICA.

NARDUS INDICA quæ ſpica, ſpica nardi, & ſpica indica officinarum C. B. INDIAN NARD, or SPIKENARD: the buſhy top of the root, or the remains of the withered ſtalks and ribs of the leaves, of an Indian graſſy-leaved plant of which we have no particular deſcription. The nard, as brought to us, is a congeries of ſmall tough reddiſh brown fibres; cohering cloſe together, but not interwoven, ſo as to form a bunch or ſpike about the ſize of a finger: ſometimes two or three bunches iſſue from one head, and ſometimes bits of leaves and ſtalks in ſubſtance are found among them.

THE Indian nard, now kept in the ſhops chiefly as an ingredient in the mithridate and theriaca, was formerly employed in the ſame intentions as the Celtic, and is ſaid to be uſed among the orientals as a ſpice. It is moderately warm and pungent, accompanied with a flavour not diſagreeable.

NASTURTIUM AQUATICUM.

NASTURTIUM AQUATICUM Pharm. Lond. & Edinb. Naſturtium aquaticum ſupinum C. B. Siſymbrium aquaticum Tourn. Creſſio quibuſdam. Siſymbrium Naſturtium aquaticum Linn. WATER CRESSES: a juicy plant, with browniſh, oblong, obtuſe leaves, ſet nearly in pairs, without pedicles, on a middle rib, which is terminated by an odd one larger and longer-pointed than the reſt: the ſtalks are hollow, pretty thick, channelled, and crooked: on the tops grow tufts of ſmall tetrapetalous white flowers, followed

followed by oblong pods, which burſting throw out a number of roundiſh ſeeds. It grows in rivulets and the clearer ſtanding waters, and flowers in June: the leaves remain green all the winter, but are in greateſt perfection in the ſpring.

THE leaves of the water creſſes have a moderately pungent taſte; and, when rubbed betwixt the fingers, emit a quick penetrating ſmell, like that of muſtard ſeed, but much weaker. Their pungent matter is taken up both by watery and ſpirituous menſtrua, and accompanies the aqueous juice which iſſues copiouſly upon expreſſion: it is very volatile, ſo as to ariſe, in great part, in diſtillation with rectified ſpirit as well as with water, and almoſt totally to exhale in drying the leaves, or inſpiſſating by the gentleſt heat, to the conſiſtence of an extract, either the expreſſed juice, or the watery, or ſpirituous tinctures: both the inſpiſſated juice and the watery extract diſcover to the taſte a ſaline impregnation, and in keeping throw up cryſtalline efflorescences to the ſurface. On diſtilling with water conſiderable quantities of the herb, a ſmall proportion of a ſubtile, volatile, very pungent eſſential oil is obtained.

This herb is one of the milder acrid, aperient, antiſcorbutics; of the ſame general virtues with the *cochlearia*, but conſiderably leſs pungent, and in great meaſure free from the peculiar flavour which accompanies that plant. Hoffman has a great opinion of it, and recommends it as of ſingular efficacy for ſtrengthening the viſcera, opening obſtructions of the glands, promoting the fluid ſecretions, and purifying the blood and humours: for theſe purpoſes the herb may be uſed as a dietetic article, or the expreſſed juice taken

taken in doſes of from one to four ounces twice or thrice a day.

NASTURTIUM HORTENSE.

NASTURTIUM HORTENSE vulgatum C. B. Lepidium ſativum Linn. GARDEN CRESSES: a low plant, with variouſly cut winged leaves, bearing on the top of the round ſtalk and branches tufts of tetrapetalous white flowers, which are followed by roundiſh capſules, flatted on one ſide, full of reddiſh round ſeeds. It is annual, and raiſed in gardens.

THE garden creſs is an uſeful dietetic herb in ſcorbutic habits, viſcidities of the juices, obſtructions of the viſcera, and for promoting digeſtion; nearly of the ſame quality with water creſs, but ſomewhat milder. The ſeeds are conſiderably more pungent than the leaves, and agree in their general qualities with thoſe of muſtard.

NATRON.

NATRON, Anatron, Soude blanche, Pharm. Pariſ. Nitrum antiquorum. Aphronitrum. Baurach. NATRON, or MINERAL FIXT ALKALINE SALT: This ſalt is contained in great abundance in the waters of the ocean, and makes the baſis of the neutral ſalt ſo plentifully extracted from them for alimentary uſes. It is likewiſe diſcoverable in ſundry mineral ſprings, even of thoſe which do not participate of ſea ſalt. The celebrated Seltzer waters, in the archbiſhoprick of Treves, appear to be no other than a dilute ſolution of this ſalt mixed with a little earthy matter: twelve ounces of the water, according to Hoffman's

Hoffman's analyſis, yield a ſcruple of the pure alkali. In ſome of the eaſtern countries it is found in conſiderable quantities on the ſurface of the earth, ſometimes pure, but more commonly blended with various heterogeneous matters, from which it is extracted by means of water. I have been favoured by Dr. Heberden with a ſample of this ſalt in a very pure ſtate, which was taken up on the Pic of Teneriffe, and with which ſome parts of that mountain are covered. An account of this ſalt, as found foſſil in a cryſtalline ſtate, in the country of Tripoli, is contained in the *Phil. Tranſ.* vol. lxi. part ii. The alkali called *ſoda*, or *barilla*, prepared by incinerating the maritime plant kali or glaſswort, contains a ſalt of the ſame kind. * This is received into the London catalogue of ſimples, and a purified ſalt is ordered to be prepared from it, by repeated ſolution in water, colature, and cryſtallization.

Barilla *Ph. Lond.*
Natron præpar. *Ph. Lond.*

The mineral alkali agrees in its general qualities with the common lixivial ſalts of vegetables. The differences which have been obſerved are, that it is milder and leſs acrid in taſte: that it melts eaſier in the fire, and requires more water for its ſolution: that when diſſolved in water it concretes, on evaporation, into cryſtalline maſſes: that when expoſed to a moiſt air, though it grows ſomewhat moiſt on the ſurface, it does not run into a liquid form: that in a dry air, the cryſtals loſe the water neceſſary for their cryſtalline form, and fall by degrees into a white powder: that the neutral ſalt, reſulting from its coalition with the vitriolic acid, *ſal glauberi*, is very eaſily diſſoluble in water and fuſible in the fire: that with the nitrous acid it forms cubical cryſtals, *nitrum cubicum*; with the marine, perfect ſea ſalt; with

tartar, a ſalt which eaſily cryſtallizes, *ſal rupellenſe*. Made cauſtic by lime, it proves greatly inferiour to the vegetable alkali in diſſolving the urinary calculus *(a)*.

This ſalt appears to poſſeſs the ſame general virtues with the vegetable alkalies; but as it does not liquefy in the air, it is better adapted for an ingredient in powders; and as it is leſs acrimonious, it may be preſumed to be leſs diſpoſed to ſtimulate the firſt paſſages: ſome of the chemiſts have taken great pains, in the preparation of the common alkalies, to preſerve in them a part of the oil of the plant, ſo as to reduce them to ſuch a degree of mildneſs, as this alkali, with much greater uniformity and certainty, poſſeſſes in its pure ſtate.

NEPETA.

MENTHA CATARIA vulgaris, & major C. B. Cataria & Herba felis quibuſdam. Nepeta Cataria Linn. NEP, or CATMINT, ſo called from its being often deſtroyed by cats: a hoary plant; with ſquare ſtalks; heart-ſhaped, acuminated, ſerrated leaves, ſet in pairs on long pedicles; and whitiſh labiated flowers ſtanding in ſpikes on the tops of the branches: the upper lip of the flower is divided into two, the lower into three ſections. It is ſometimes found wild in hedges and on dry banks, and flowers in June.

THE leaves of catmint have a moderately pungent aromatic taſte, and a ſtrong ſmell, not ill reſembling that of a mixture of ſpearmint and pennyroyal; of the virtues of which herbs, in weak-

(a) Med. Tranſ. i. 124.

neſſes

neſſes of the ſtomach, and more particularly in uterine diſorders, they appear alſo to participate. Their active matter is extracted both by water and rectified ſpirit, moſt perfectly by the latter: the watery tinctures are of a greeniſh yellow or browniſh colour, the ſpirituous of a deep green. In diſtillation with water, they yield a yellowiſh eſſential oil, ſmelling ſtrongly of the catmint, but rather leſs agreeable than the herb itſelf: the remaining decoction is ungratefully bitteriſh and ſubaſtringent. Rectified ſpirit elevates likewiſe a part of the ſmell and aromatic warmth, but leaves the greateſt ſhare behind concentrated in the extract, which proves more grateful than the leaves in ſubſtance, having more of the mint and leſs of the pennyroyal flavour.

NEPHRITICUM LIGNUM.

LIGNUM peregrinum aquam cæruleam reddens C. B. NEPHRITIC WOOD: an American wood, brought to us in large compact ponderous pieces, without knots: the outer part is of a whitiſh or pale yellowiſh colour, the medullary ſubſtance of a dark browniſh or reddiſh. It is the product of the *Guilandina Moringa* of Linnæus. This wood, macerated in water for half an hour or an hour, imparts a deep tincture, appearing, when placed betwixt the eye and the light, of a golden colour, in other ſituations of a fine blue: a property in which it agrees with the bark of the aſh tree, and differs from all other known woods. Pieces of a different kind of wood, are often mixed with it, which give only a yellow tincture to water.

NEPHRITIC WOOD has a ſlightly bitteriſh ſomewhat pungent taſte; and in raſping or ſcraping

emits a faint ſmell of the aromatic kind. The blue watery tincture has neither ſmell nor taſte: but a ſtrong infuſion, which appears not blue, but of a dark browniſh colour, is manifeſtly bitter, and ſmells pretty agreeably; inſpiſſated, it leaves a blackiſh brown extract, in which the bitterneſs is more conſiderable, and accompanied with a ſlight aſtringency. A ſaturated tincture made in rectified ſpirit, is of a blackiſh red colour; the extract, obtained by inſpiſſating it, is a tenacious reſin, larger in quantity and weaker in taſte than the watery extract. According to Cartheuſer, the ſpirituous extract amounts to about one fifth, the watery only to one twelfth the weight of the wood. Both menſtrua ſeem to extract the whole of the active matter; for if the wood remaining after the action of the one, be digeſted or boiled in the other, and the liquors inſpiſſated, the extracts thus obtained have neither ſmell nor taſte.

This wood ſtands greatly recommended in difficulties of urine, nephritic complaints, and all diſorders of the kidneys and urinary paſſages; and is ſaid to have this peculiar advantage, that it does not, like the warmer diuretics, heat or offend the parts: the blue aqueous tincture is directed to be uſed as common drink, and freſh water to be poured on the remaining wood ſo long as it communicates any bluneſs. For my own part, I have never known its being given medicinally, nor is it received in practice: Geoffroy ſays he has ſeen ſome inſtances of its being uſed without ſucceſs; and indeed, whatever may be the virtues of ſtrong infuſions or extracts of the wood, the exceedingly dilute blue tincture cannot be expected to have much efficacy.

NICO-

NICOTIANA.

TOBACCO: a plant with alternate leaves, and monopetalous tubulous flowers divided into five ſections: the flower is followed by an oval capſule, which opening longitudinally, ſheds numerous ſmall ſeeds.

1. NICOTIANA *Pharm. Lond. Nicotiana major latifolia C. B. Nicotiana Tabacum Linn.* Tobacco: with large, ſharp-pointed, pale green, ſoft leaves, about two feet in length, joined immediately to the ſtalk without pedicles. It was brought into Europe by M. Nicot, from the iſland Tobago in America, about the year 1560, and is now cultivated for medicinal uſe in our gardens. It is perennial, as is ſaid, in America; and annual with us.

THE leaves of tobacco have a ſtrong diſagreeable ſmell, and a very acrid burning taſte. They give out their acrid matter both to water and ſpirit, moſt perfectly to the latter: the aqueous infuſions are of a yellow or brown colour, the ſpirituous of a deep green. They yield nothing conſiderable in diſtillation with either menſtruum: nevertheleſs their acrimony is greatly abated in the inſpiſſation of the tinctures, the watery extract being leſs pungent than the leaves themſelves, and the ſpirituous not much more ſo. The ſeveral ſorts of tobacco brought from abroad, are ſtronger in taſte than that of our own growth, and the extracts made from them much more fiery, but in leſs quantity.

Tobacco taken internally, even in a ſmall doſe, or decoctions of it uſed as a glyſter, prove virulently cathartic and emetic, occaſioning ex-

treme anxiety, vertigoes, ſtupors and diſorders of the ſenſes: ſome have nevertheleſs ventured upon it both as an evacuant, and in minuter quantities as an aperient and alterant, in epilepſies and other obſtinate chronical diſorders; a practice which, though in ſome caſes it may have been ſucceſsful, appears much too hazardous to be followed, particularly in the more irritable, hot, dry, bilious conſtitutions. By long boiling in water, its deleterious power is abated, and at length deſtroyed: an extract made by long coction is recommended by Stahl and other German phyſicians, as the moſt effectual and ſafe aperient, detergent, expectorant, diuretic, &c. but the medicine muſt neceſſarily be precarious and uncertain in ſtrength, and has never come into uſe among us.

* In the year 1785, Dr. Fowler publiſhed "Medical Reports of the Effects of Tobacco principally with regard to its diuretic Quality in the Cure of Dropſies and Dyſuries." In theſe he repreſents it as a ſafe and effectual remedy, properly adminiſtered, proving a pretty certain diuretic, and generally an anodyne. Its operation is commonly attended with vertigo; and frequently with nauſea. It often acts, in a full doſe, as a laxative. The mode of exhibition which he generally uſed, was a watery infuſion of an ounce to a pint, given by drops, from ſix to a hundred, twice a day.

The ſmoke of tobacco, received by the anus, is ſaid to be of ſingular efficacy in obſtinate conſtipations of the belly. Hoffman obſerves, that horſes have often been relieved by this remedy, but in human ſubjects it has been rarely tried; and ſays he has known ſome of the common people, who laboured under excruciating pains of the inteſtines, freed in an inſtant from all pain

by

by ſwallowing the ſmoke. * Both the decoction and the ſmoke have not unfrequently been injected in caſes of incarcerated herniæ, and often with ſucceſs. The ſmoke thus applied is recommended as one of the principal means for the revival of perſons apparently dead from drowning or other ſudden cauſes; but ſome ſuſpect the narcotic powers of tobacco, as unfavourable in theſe caſes.

Tobacco is ſometimes employed externally in unguents and lotions, for cleanſing foul ulcers, deſtroying cutaneous inſects, and other like purpoſes: it appears to be deſtructive to almoſt all kinds of inſects, to thoſe produced on vegetables as well as on animals. Beaten into a maſh with vinegar or brandy, it has ſometimes proved a ſerviceable application for hard tumours of the hypochondres *(a)*. Some caution however is requiſite even in theſe external uſes of tobacco, particularly in ſolutions of continuity: there are inſtances of its being thus tranſmitted into the blood, ſo as to produce virulent effects. Of the common uſes of the leaves brought from America, prepared in different forms, both the advantages and inconveniences are too well known to require being mentioned here.

2. NICOTIANA MINOR *C. B. Priapeia quibuſdam nicotiana minor J. B. Tobacco anglicum Park. Hyoſcyamus luteus Ger. Nicotiana ruſtica Linn.* Engliſh tobacco: with ſhort, ſomewhat oval leaves, ſet on pedicles. It is annual, originally a native of America, but now propagates itſelf plentifully in England and other parts of Europe.

(a) Edinburgh medical eſſays, vol. ii. *art.* 5.

THE leaves of this ſpecies are ſaid by ſome to be of the ſame quality with thoſe of henbane; by others, to be ſimilar to the preceding, but weaker, which, in point of taſte, they manifeſtly are. They have been ſometimes ſubſtituted, in our markets, to the true tobacco; from which they are readily diſtinguiſhable by their ſmallneſs, their oval ſhape, and their being furniſhed with pedicles.

NITRUM.

NITRUM Pharm. Lond. & Edinb. NITRE, or SALTPETRE: a neutral ſalt, formed by the coalition of the common vegetable fixt alkaline ſalt with a peculiar acid: of a ſharp penetrating cooling taſte: ſoluble in eight times its weight of very cold water, in leſs than thrice its weight of water temperately warm, and, as is ſaid, in one third its weight of boiling water: concreting from its ſaturated ſolutions, on evaporation of a part of the fluid or a gradual diminution of the heat that kept it diſſolved, into colourleſs tranſparent cryſtals, which in figure are hexagonal priſms terminated by pyramids of the ſame number of ſides: melting thin as water in a moderate heat: when heated to ignition, deflagrating, on the contact of any inflammable ſubſtance, with a bright flame and a conſiderable hiſſing noiſe; and leaving, after the detonation, its fixed alkaline ſalt, the acid being deſtroyed in the act of accenſion.

Nitrum fixum.

The origin of nitre, or rather of the acid which makes the characteriſtic part of nitre, is unknown. Thus much only is known with certainty, that common waters, both atmoſpherical and ſubterraneous, often contain a little of this acid in combination with earthy or other bodies,

bodies, ſo as to yield, by cryſtallization, on ſupplying the vegetable fixt alkali, a perfect nitre: and that when animal and vegetable ſubſtances, mixed with porous abſorbent earths, have lain expoſed to the air till they are thoroughly rotted, they are found in like manner to contain a ſmall portion of nitre or of nitrous acid, ſo as to give out a little nitre to water, either without addition, or on being ſupplied with the proper alkaline baſis. On this foundation, ſome nitre is prepared in different parts of Europe: but the greateſt quantities are the produce of the Eaſt Indies; the means by which it is there ſo plentifully obtained, or whether it is a natural or artificial production, have not yet, ſo far as I can learn, been revealed.

Nitre, as brought into the ſhops, has generally a greater or leſs admixture of ſea ſalt; from which it is purified, by diſſolving it in boiling water, and, after duly evaporating the filtered ſolution, ſetting it in a cold place to cryſtallize. The more impure brown nitre requires repeated diſſolution and cryſtallization: to promote the purification, it is commonly diſſolved in lime-water, or the ſolution ſuffered to percolate through quicklime or a mixture of quicklime and wood aſhes. It is obſervable that nitrous ſolutions differ from thoſe of moſt other ſalts in contracting no pellicle in evaporation: if a ſolution of rough nitre, containing ſea ſalt, be boiled down till a pellicle appears, or till a part of the ſalt begins to concrete and fall to the bottom, all that thus ſeparates is ſaid to be ſea ſalt, boiling water keeping far leſs of this ſalt diſſolved than it does of nitre: but if the liquor be now poured off, though it ſhould ſtill retain a quantity of the ſea ſalt, only the nitre will

Nitrum purificatum *Ph. Lond.*

will cryſtallize in cooling, ſea ſalt continuing diſſolved in nearly as little water when cold, as was ſufficient to keep it diſſolved when boiling.

This ſalt is one of the principal medicines of the antiphlogiſtic claſs; of general uſe in diſorders accompanied with inflammatory ſymptoms whether chronical or acute, and as a corrector of the inflammation or irritation produced by ſtimulating drugs. Hoffman thinks it has an advantage above the refrigerants of the acid kind, in not being liable to coagulate the animal juices; ſolutions of it mingling with or diſſolving recent thick blood, and in ſome degree preſerving it from coagulation as well as corruption; at the ſame time changing its colour, when dark or blackiſh, to a crimſon, an effect which it produces alſo, in a leſs degree, upon the fleſhy parts of dead animals *(a)*. It retards likewiſe the coagulation of milk, but ſeems, from Stahl's account, to increaſe the conſiſtence of thin ſerous humours; for he obſerves, that when uſed in gargariſms for inflammations of the fauces in acute fevers, it thickens the ſalival fluid into a mucus, which keeps the parts moiſt for a conſiderable time, whereas, when nitre is not added, a dryneſs of the mouth preſently enſues *(b)*.

This medicine generally promotes urine, and often gives relief in ſtranguries and heat of urine whether ſimple or proceeding from a venereal

(a) Hoffman, *De ſalium mediorum virtute*, § 16. *De medicamentis ſelectioribus*, § 13. *De præſtantiſſima nitri virtute*, § 5.—We cannot, however, conclude much, from theſe kinds of experiments, in regard to the medical powers of nitre, or its effects on the animal fluids, whilſt under the laws of the vital œconomy.

(b) De uſu nitri medico, Menſis martius, Opuſc. p. 569.

taint.

taint. It ſometimes looſens the belly, particularly in hot diſpoſitions: in cold phlegmatic temperaments it rarely has this effect, though given in very large doſes: the diarrhœas of acute diſeaſes, and fluxes in other circumſtances from an acrimony of the bile or inflammation of the inteſtines, have been frequently reſtrained by it. In high fevers, it often promotes a diaphoreſis or ſweat; in malignant fevers, where the pulſe is low and the ſtrength greatly depreſſed, it impedes that ſalutary excretion and the eruption of the exanthemata; in conſequence of its general power of diminiſhing inflammation and heat. It ſeems to be prejudicial in diſorders of the lungs, though ſome *(a)* have ventured to preſcribe it in hæmoptyſes.

The uſual doſe of nitre, among us, is from two or three grains to a ſcruple; though in many caſes it may be given with great ſafety, and to better advantage, in larger quantities. It has been ſaid, that nitre loſes, in being melted, half its weight of watery moiſture, and recovers this weight again on being diſſolved and cryſtallized *(b)*; from whence it would follow, that one part of melted nitre is equivalent to two of the cryſtals: but there was probably ſome miſtake in this experiment, for I have repeated it with different parcels of nitre, and never found the loſs to be ſo much as one twentieth of its weight.

(a) Riverius, *Cent.* i. *obſ.* 83. Stahl, *ubi ſupra, & Obſerv. chym. phyſ. med. curioſ. p.* 464. Tralles, *Virium terreis aſcriptorum examen, p.* 246. Dickſon, *Lond. med. obſ.* iv. 106. This laſt writer ventures to aſſert, that he can depend upon an electuary of conſerve of roſes and nitre in the cure of an hæmoptoë almoſt equally with bark in an intermittent.

(b) Geoffroy, *Memoires de l'acad. des ſcienc. de Paris, pour l'ann.* 1717.

Nitre

Trochiſci e nitro *Ph. Lond.*

Nitre may be commodiouſly taken in the form of troches. The London college direct one part of the purified ſalt to be ground with three parts of fine ſugar, and one and a half of gum tragacanth in powder, and the mixture made up with water. In this and all other ſolid forms it is accompanied, however, with one inconvenience; being liable, eſpecially when the doſe is conſiderable, to occaſion a pain or uneaſineſs at the ſtomach, which can be prevented only by plentiful dilution. A liquid form is therefore, in general, the moſt eligible, and may be eaſily rendered grateful by a proper addition of ſugar.

Sal prunellæ. Cryſtallus mineralis.

The chemiſts have thought to improve the virtue of nitre, by deflagration with a ſmall portion of ſulphur: they melt the nitre, in a crucible, and gradually ſprinkle on it one twenty-fourth its weight of flowers of ſulphur: when the deflagration is over, they pour out the melted ſalt into clean, dry, warm braſs moulds, ſo as to form it into little cakes. In this proceſs, a part of the acid of the nitre, and the inflammable principle of the ſulphur, detonating together, are both deſtroyed; while that part of the alkali of the nitre, which is thus forſaken by its acid, unites with the acid of the ſulphur, which is the ſame with that of vitriol, into a new neutral ſalt, the ſame with vitriolated tartar; and the preparation is found to be no other than a mixture of unchanged nitre with a ſmall portion of this vitriolated ſalt. If the nitre and ſulphur be taken in equal quantities, the mixture injected by a little at a time into a red-hot crucible, and kept in till all detonation ceaſes, nearly the whole of the nitre will thus be changed; and the remaining ſalt, purified by ſolution

Sal polychreſt. *Ph. Ed.*

in

in water, proves almoſt wholly the ſame with vitriolated tartar.

The ſame ſalt is produced by pouring gradually on nitre the pure acid of vitriol or ſulphur: this acid, uniting with the alkali, diſengages the acid of the nitre, which begins to exhale, immediately on mixture, in yellow or red fumes, and may be collected by diſtillation in a glaſs retort with a moderate fire. Two parts of nitre to one of vitriolic acid, is a proper proportion for diſengaging all the acid of the nitre; the remaining ſalt is nearly a pure vitriolated tartar. If three parts of nitre be uſed to one of the vitriolic acid, a part of the nitre remains unchanged: on diſſolving the whole reſiduum in hot water, and ſetting the filtered ſolution to cryſtallize, the vitriolated ſalt ſhoots firſt, greateſt part of the nitre continuing diſſolved.

Acidum nitroſum vulgo ſpiritus nitri glauberi *Ph. Ed.*

Acidum nitroſum *Ph. Lond.*

The nitrous ſpirit is obtained alſo by diſtillation in a ſtrong fire with vitriol in ſubſtance; the vitriol parting, when ſtrongly heated, with its own acid, which then acts upon the nitre and extricates its acid in the ſame manner as when the pure vitriolic acid is uſed. The ſpirit thus diſtilled, called aqua fortis, is more phlegmatic than the preceding, in proportion as the vitriol employed contains more phlegm than the oil of vitriol: it is likewiſe liable to an admixture of the vitriolic acid, more or leſs of which is generally forced over. The proportion uſually directed is three parts of nitre, three of green vitriol uncalcined, and one and a half of the ſame vitriol calcined. The ingredients are well mixed together, the diſtillation performed in an earthen retort or an iron pot fitted with an earthen head and a receiver, and continued ſo long as any red vapours ariſe. *The colleges of London and Edinburgh have now diſcarded this

Aqua fortis.

Acidum nitrosum tenue *Ph. Ed.* —dilutum *Ph. Lond.*

this kind of preparation, and direct a weaker nitrous acid to be made by mixing equal parts of the strong acid and pure water.

The nitrous spirit, usually distilled from rough nitre, contains often an admixture of the marine acid as well as of the vitriolic. The first is discovered, and separated, by dropping in a little solution of silver, the latter by a solution of chalk or any other calcareous earth, made in the pure nitrous acid; the silver absorbing the marine acid, and the chalk the vitriolic, and forming with those acids, respectively, indissoluble concretes, which immediately render the liquor milky, and on standing settle to the bottom. The solutions are to be cautiously and slowly dropt in, so long only as they continue to produce a milkiness: in case of an excess in their quantity, if the spirit is required perfectly pure, it is to be rectified by redistillation.

By the property on which the above method of purification depends, the nitrous spirit may be readily distinguished from the other two mineral acids. By the red or yellowish red colour of its fumes; by its forming with one fourth its weight of sal ammoniac, or with sea salt or its acid, a menstruum that perfectly dissolves gold; by its deflagrating on the contact of any inflammable matter, when heated to ignition, whatever other body it be previously combined with; it may with certainty be distinguished both from those and from every other known species of acid.

This acid has been sometimes given as a diuretic, from two or three to fifty drops, diluted largely with water; but its principal use is in combination with other bodies.

Combined

Combined with vegetable fixt alkalies, it reproduces common nitre. With the mineral fixt alkali, or *ſoda*, it compoſes a ſpecies of nitre in ſome reſpects different from the common, cryſtallizing not into a priſmatic but a cubical figure; with volatile alkalies, a ſubtile pungent ſalt remarkable for its ſolubility in ſpirit of wine:*(a) of theſe two compounds, the medicinal qualities are little known, though they ſhould ſeem to be well deſerving of inquiry.

Nitrum cubicum.

Nitrum flammans, volatile, five ammoniacale.

*(a) NITRUM FLAMMANS, VOLATILE, AMMONIACALE. This ſalt diſſolves readily in water, and becomes pappy or fluid in a moiſt air: by ſlow evaporation in gentle warmth it ſhoots into large cryſtals, much reſembling thoſe of common nitre. It diſſolves in ſix times its weight or leſs, of rectified ſpirit of wine. In a heat equal to that of boiling water, it melts and looks like oil, without ſuffering any loſs of its ſubſtance; on increaſing the heat a very little beyond that degree, it begins to exhale, and in a little time is wholly diſſipated: the fumes, caught in proper veſſels, condenſe not into a concrete ſalt, but a fluid ſpirit; in which, however perfect the neutralization was at firſt, the acid appears now to prevail. The ſalt thrown into a red-hot crucible, without addition of any inflammable matter, emits bright flames, without detonation or noiſe: the flaſhes continue to play on the ſurface till the whole quantity of the ſalt is diſſipated.

This ſalt is in taſte ſimilar to common nitre, but ſomewhat ſharper or more penetrating. Taken in doſes of from ten to twenty-five grains, it ſenſibly promotes urine; and if the patient is kept warm, perſpiration or ſweat. It is recommended by Kurella, preferably to the other neutral ſaline medicines, in inflammatory caſes, in exanthematous fevers, and as an attenuant and reſolvent in obſtructions of the viſcera. He gives it either in powder, mixed with abſorbents neutralized by lemon juice, or diſſolved in well dulcified ſpirits of vitriol or nitre, in which laſt form he finds it in ſome caſes to anſwer beſt: from fifteen to twenty-five drops of the ſaturated ſolution are given for a doſe in any agreeable warm liquor. He recommends it likewiſe externally againſt inflammations, eryſipelaſes, and gouty pains, diſſolved in ſpirit of wine, either by itſelf, or with the addition of camphor and opium. *M. S. of Dr. Lewis.*

The

The acid, in the moſt concentrated ſtate in which it is commonly met with, ſaturates about five ſixths its weight of vegetable fixt alkali *(a)*.

Solutions of calcareous earths in this acid are in taſte bitteriſh and very pungent. They are difficultly made to aſſume a cryſtalline appearance; and when evaporated and exſiccated by heat, the dry ſalt deliquiates again in the air. This ſalt has not hitherto been employed medicinally, nor is it as yet much known. It is a common ingredient in waters, which when its quantity is conſiderable, it renders hard and indiſpoſed to putrefy, apparently impeding putrefaction in a much greater degree than an equal quantity of ſea ſalt. Alkaline ſalts, fixt or volatile, added to the ſolutions, precipitate the earthy baſis; and uniting with the acid in its ſtead, compoſe therewith, according to the ſpecies of alkali employed, the common, cubical, or ammoniacal nitre mentioned in the preceding paragraph.

Nitrum calcareum verum.

The nitrous ſpirit diſſolves zinc, iron, copper, biſmuth, lead, mercury, and ſilver, the moſt readily of all the acids: tin it diſſolves imperfectly: regulus of antimony it only corrodes: ſee the reſpective metals.

The concentrated acid, combined with a due proportion of rectified ſpirit of wine, loſes its acidity; the coalition of the two producing a new compound, of a gratefully pungent taſte and colour, and which is given from a few drops to a tea-ſpoonful or more as mildly aperient, diuretic, antiphlogiſtic, in ſome degree anodyne and antiſpaſmodic. On mixing the two ſpirits together, a great heat, ebullition, and noxious

(a) Homberg, *Memoires l'acad. roy. des ſcienc. de Paris, pour l'ann.* 1699.

red

red vapours arise: this conflict is less violent when, cautiously and by little and little, the acid spirit is added to the vinous, than when the vinous is added to the acid. It is prudent also to place the bottle containing the spirit of wine, in a vessel of cold water. One part of the strong acid spirit is commonly taken to three of the spirit of wine‡, or half a pound to a quart†: the mixture, after standing for some time that the two liquors may in some degree unite, is set to distil with a gentle fire, by which the union is completed, and the very volatile dulcified spirit separated from the more fixt acid that remains undulcified. The distillation has been directed to be continued so long as the spirit that comes over raises no effervescence with fixt alkaline salts; it may be regulated more commodiously by performing the process in a water bath‡, for all that rises in this heat will be found to be a pure dulcified spirit.

Spiritus æther. nitrosi
† *Ph. Lond.* Acidum nitri vinosum vulgo spiritus nitri dulcis
‡ *Ph. Ed.*

A subtile ethereal fluid, similar in its general qualities to that described under the head of vitriolic acid, is obtainable with the nitrous in a more compendious manner. If equal parts by measure of spirit of nitre and spirit of wine, of moderate strength, be mixed together, the bottle closely stopt, and set in a cool place, a large proportion of ether rises to the surface in a few days: it may be purified from the adhering acid, by shaking it with water in which some fixt alkaline salt has been dissolved, and then drawing off the ether by distillation. The medicinal qualities of this subtile fluid are not as yet much known.

Nitrous ether.

NUMMULARIA.

NUMMULARIA Pharm. Pariſ. Nummularia major lutea C. B. Hiruntlinaria. Centimorbia. Lyſimachia Nummularia Linn. MONEY-WORT: a low creeping plant, with ſquare ſtalks, and ſmooth little roundiſh or heart-ſhaped leaves ſet in pairs at the joints upon ſhort pedicles: in their boſoms appear yellow ſolitary monopetalous flowers, each divided into five oval ſegments, and followed by a ſmall round capſule full of minute ſeeds. It is perennial, grows wild in moiſt paſture grounds, and flowers from May to near the end of ſummer.

THIS herb is accounted reſtringent, antiſcorbutic, and vulnerary. Boerhaave looks upon it as ſimilar to a mixture of ſcurvygraſs with ſorrel: it appears indeed to have ſome degree both of pungency and acidity, but it is far weaker than thoſe herbs, or than any mixture of the two.

NUX MOSCHATA.

NUX MOSCHATA Pharm. Lond. & Edinb. Nux myriſtica fructu rotundo C. B. Nuciſta. Myriſtica officinalis Linn. NUTMEG: the aromatic kernel of a large nut, produced by a tree ſaid to reſemble the pear tree, growing in the Eaſt Indies. The outer part of the fruit is a ſoft fleſhy ſubſtance like that of the walnut, which ſpontaneouſly opens when ripe: under this lies a red membrane called mace, forming a kind of reticular covering, through the fiſſures of which is ſeen the hard woody ſhell that includes

includes the nutmeg. Two ſorts of this kernel are diſtinguiſhed: one of an oblong figure, called male; the other roundiſh, or of the ſhape of an olive, called female: this laſt is the officinal ſpecies, being preferred to the other on account of its ſtronger and more agreeable flavour, and its being, as is ſaid, leſs ſubject to become carious. The nutmegs are cured, according to Rumphius, by dipping them in a ſomewhat thick mixture of lime and water, that they may be every where coated with the lime, which contributes to their preſervation.

THE nutmeg is a moderately warm, grateful, unctuous ſpice; ſuppoſed to be particularly uſeful in weakneſs of appetite, and the nauſeæ and vomitings accompanying pregnancy, and in fluxes; but liable, when taken too freely, to ſit very uneaſy on the ſtomach, and, as is ſaid, to affect the head. Roaſted with a gentle heat, till it becomes eaſily friable, it proves leſs ſubject to theſe inconveniences, and is ſuppoſed likewiſe to be more uſeful in fluxes.

Nutmegs, diſtilled with water, yield nearly one ſixteenth *(a)* their weight of a limpid eſſential oil, very grateful, poſſeſſing the flavour of the ſpice in perfection, and which is ſaid to have ſome degree of an antiſpaſmodic or hypnotic *(b)* power: on the ſurface of the remaining decoction is found floating an unctuous concrete matter like tallow, of a white colour, nearly inſipid, not eaſily corruptible, and hence recommended as a baſis for odoriferous bal-

Ol. eſſent. nucis moſchatæ *Ph. Lond.*

(a) Hoffman, *Obſervationes phyſico-chymicæ, lib.* i. *obſ.* 1.

(b) Miſcell. nat. curioſor. dec. iii. *ann.* ii. *obſ.* 120. Bontius, *de medicina Indorum, p.* 20.

ſams *(a)*: the decoction, freed from this ſebaceous matter, and inſpiſſated, leaves a weakly bitter ſubaſtringent extract. Rectified ſpirit takes up, by maceration or digeſtion, the whole ſmell and taſte of the nutmegs, and receives from them a deep bright yellow colour: the ſpirit, drawn off by diſtillation from the filtered tincture, is very ſlightly impregnated with their flavour; greateſt part of the ſpecific ſmell, as well as the aromatic warmth, bitteriſhneſs and ſubaſtringency of the ſpice remaining concentrated in the extract. The eſſential oil, and an agreeable cordial water, lightly flavoured with the volatile parts of the nutmeg by drawing off a gallon or nine pounds of proof ſpirit from two ounces of the ſpice, are kept in the ſhops. Both the oil, and the ſpirituous tincture and extracts, agree better with weak ſtomachs than the nutmegs in ſubſtance.

Spir. nucis moſch. *Ph. Lond.*
Aqua nucis moſch. *Ph. Ed.*

Nutmegs, heated, and ſtrongly preſſed, give out a fluid yellow oil, which concretes on growing cold into a ſebaceous conſiſtence. Rumphius informs us, that in the ſpice iſlands, when the nuts are broken, thoſe kernels which appear damaged, carious, or unripe, are ſeparated for this uſe, and that ſeventeen pounds and a quarter of ſuch kernels yield only one pound of oil, whereas, when the nutmeg is in perfection, it is ſaid to afford near one third its own weight.

Two kinds of ſebaceous matter, ſaid to be expreſſed from the nutmeg, are diſtinguiſhed in the ſhops by the name of oil of mace: the

* *(a)* After a fluid eſſential oil had been procured from nutmegs by diſtillation, on repeating the proceſs upon the reſiduum, an oil of a butyraceous conſiſtence aroſe, which poſſeſſed the taſte and odour of the nutmeg, and was perfectly ſoluble in alcohol. *Gaubii Adverſar.*

beſt

beſt ſort, brought from the Eaſt Indies in ſtone jars, is ſomewhat ſoft, of a yellow colour, and of a ſtrong agreeable ſmell greatly reſembling that of the nutmeg itſelf: the other comes from Holland in ſolid maſſes, generally flat and of a ſquare figure, of a paler colour and much weaker ſmell. Theſe oils are employed chiefly externally in ſtomach plaſters, and in anodyne and nervine unguents and liniments. They appear to be a mixture of the groſs ſebaceous matter of the nutmeg with a little of the eſſential or aromatic oil; both which may be perfectly ſeparated from one another by maceration or digeſtion in rectified ſpirit, or by diſtillation with water. The ſpirituous tincture, the diſtilled water, and the eſſential oil, are nearly ſimilar to thoſe drawn from the nutmeg itſelf, the pure white ſebaceous ſubſtance being left behind.

Ol. nucis moſch. expreſſum, macis vulgo dictum *Ph. Lond. & Ed.*

NUX PISTACIA.

PISTACHIO NUT: an oblong, pointed nut, about the ſize and ſhape of a filberd; including a kernel of a pale greeniſh colour, covered with a yellowiſh or reddiſh ſkin. It is the produce of a large tree, with winged leaves, reſembling thoſe of the aſh, *piſtacia peregrina fructu racemoſo ſive terebinthus indica theophraſti C. B. Piſtachia vera Linn.* which grows ſpontaneouſly in the eaſtern countries, and bears the cold of our own.

PISTACHIO NUTS have a pleaſant ſweetiſh unctuous taſte, reſembling that of ſweet almonds: their principal difference from which conſiſts in their having rather a greater degree of ſweetneſs, accompanied with a light grateful

flavour, and in being more oily, and hence ſomewhat more emollient, and perhaps more nutritious. They have been ranked among the principal analeptics, and greatly eſteemed by ſome in certain weakneſſes and emaciations. They are taken chiefly in ſubſtance, their greeniſh hue rendering them unſightly in the form of an emulſion. They are very liable to grow rancid in keeping.

NUX VOMICA.

NUX VOMICA Pharm. Pariſ. Nux metella. VOMIC NUT: a flat roundiſh ſeed or kernel, about an inch broad and near a quarter of an inch thick, with a prominence in the middle on both ſides, of a grey colour, covered with a kind of woolly matter, internally hard and tough like horn. It is the produce of a large tree growing in the Eaſt Indies, called by Plukenet *cucurbitifera malabarienſis, ænopliæ foliis rotundis, fructu orbiculari rubro cujus grana ſunt nuces vomicæ officinarum*; by Linnæus, *Strychnos Nux Vomica.*

THIS ſeed diſcovers to the taſte a conſiderable bitterneſs, but makes little or no impreſſion on the organs of ſmell. It has been recommended in tertian and quartan fevers, in virulent gonorrhœas, and as an alexipharmac: Fallopius relates, that it was given with ſucceſs in the plague; that in doſes of from a ſcruple to half a dram, it procured a plentiful ſweat; and that where this evacuation happened, the patient recovered *(a)*. At preſent it is looked upon, and not without good foundation, as a deleterious drug; which, though like many

(a) Tract. de tumoribus præternaturalibus, cap. 27.

other

other deleterious ſubſtances, capable, in certain doſes and in certain circumſtances, of producing happy effects, has its ſalutary and pernicious operations ſo nearly and ſo indeterminably allied, that common prudence forbids its being ventured on. Hoffman tells us of a girl of ten years of age, to whom fifteen grains, given at twice, for the cure of an obſtinate quartan, proved mortal *(a)*. The principal ſymptoms it has been obſerved to produce, in human ſubjects and brutes *(b)*, are, great anxieties, ſtrong convulſions or epileptic fits, paralytic tremors and reſolutions, a great increaſe of the motion of the heart and of reſpiration, and reachings and ſubverſions of the ſtomach. Diſſections of dogs killed by it have ſhewn no material injury of the groſſer parts; from whence we may preſume that it is the nervous ſyſtem which it immediately offends. It is probable, that the active matter of this ſeed is of the ſame nature with that of bitter almonds, but more developed and in a more concentrated ſtate.

* The nux vomica was lately uſed in Sweden in an epidemic dyſentery, as it is ſaid, with remarkably good effects. A ſcruple of the powder was given to adults once a day in barley water, proper evacuants having been premiſed. Bergius *(c)*, however, aſſerts, that though the flux was ſuppreſſed for twelve hours by this medicine, it never failed to return. He alſo mentions a caſe in which the above doſe cauſed convulſive ſtretchings and vertigo; and after the cure of the dyſentery by other medicines, a pain in the ſtomach and epigaſtric region re-

(a) Philoſophia corp. human. morboſi, P. ii. *cap.* viii. § 8.

(b) Vide Wepfer, De cicuta aquatica, cap. xiii. *p.* 194, *& ſeq.*

(c) Mat. Med. 145.

mained for a long time. In the iſle of Ceylon the nux vomica is ſaid to be uſed internally as a ſpecific againſt the bite of a ſpecies of water ſnake.

THE wood or roots of the tree, or of other trees of the ſame genus, are ſometimes brought from the Eaſt Indies under the name of *lignum colubrinum (Pharm. Pariſ.)* or ſnakewood, in pieces about the thickneſs of a man's arm, covered with a browniſh or ruſty coloured bark, internally of a yellowiſh colour with whitiſh ſtreaks.

This wood, in raſping or ſcraping, emits a faint not diſagreeable ſmell; and when chewed for ſome time diſcovers a very bitter taſte. Cartheuſer relates, that it gives a gold-coloured tincture both to water and ſpirit, and that the inſpiſſated extracts are browniſh; that the watery infuſion has an agreeable ſmell like that of rhodium, the ſpirituous little or none; that the infuſions and extracts made with both menſtrua are very bitter; that the quantity of watery extract amounts to one ſixth of the wood, and that of the ſpirituous to near one fourth; and that the wood remaining after the action of ſpirit, yields ſtill, to water, a gold-coloured tincture, and one eighth its weight of a bitter ſubacrid extract: from whence water appears to be the proper menſtruum of its active matter.

The lignum colubrinum has been recommended, in ſmall doſes, not exceeding half a dram, as an anthelmintic, and in obſtinate quartans, jaundices, cachexies, and other chronical diſorders: it is ſaid to operate moſt commonly by ſweat, ſometimes by ſtool, and ſometimes by vomit. It appears however to be poſſeſſed of the ſame ill qualities with the nux vomica itſelf,

itſelf, though in a lower degree, having in ſundry inſtances been productive of convulſions, tremors, ſtupors, and diſorders of the ſenſes.

The *faba indica Pharm. Pariſ. Faba ſancti ignatii*, or *faba febrifuga*, is the produce of a tree of the ſame kind, growing in the Eaſt Indies and in the Philippine iſlands, called by Plukenet *cucurbitifera malabathri foliis ſcandens, catalongay & contara philippinis orientalibus dicta, cujus nuclei pepitas de beſayas aut catbalogan & fabæ ſancti ignatii ab hiſpanis, igaſur & mananaog inſulanis nuncupati*; by Linnæus, *Strychnos Ignatii*. The ſeeds of the gourd-like fruit, improperly called beans, are of a roundiſh figure, very irregular and uneven, about the ſize of a middling nutmeg, ſemitranſparent, and of a hard horny texture.

Theſe ſeeds have a very bitter taſte, and no conſiderable ſmell: when freſh they are ſaid to have ſomewhat of a muſky ſcent. Neumann obſerves, that an extract made of them by rectified ſpirit impreſſes at firſt a very agreeable bitterneſs, ſomewhat like that of peach kernels, which going off leaves in the mouth a ſtrong bitter; that an extract made with water is likewiſe bitter; that the watery extract is greeniſh and in quantity one half of the ſeeds, the ſpirituous yellowiſh and little more than one fifth; that the ſeeds remaining after the action of water ſcarcely gave out any thing to ſpirit, but that after ſpirit they yielded above one fourth of extract with water.

St. Ignatius's bean is ſaid by father Camelli to be employed by the common people in the Philippine iſlands againſt all diſeaſes. The effects attributed to it are ſimilar to thoſe of the two foregoing ſubſtances: he obſerves, that it generally

generally vomits, ſometimes purges, and almoſt always produces in the Europeans, though not in the Indians, ſpaſmodic motions; that the doſe in ſubſtance, as an emetic, is ten or twelve grains, to be taken an hour after eating; and that in ſmaller doſes it ſometimes promotes a plentiful ſweat *(a)*. Neumann ſays he has known intermitting fevers cured by drinking, on the approach of a paroxyſm, an infuſion of ſome grains of the ſeed made in carduus water *(b)*; and I have been informed, that two grains were found to have as much effect as a full doſe of bark. This ſeed, nevertheleſs, as it apparently partakes of the qualities of the two preceding articles, ſeems much too hazardous for general uſe.

NYMPHÆA.

WATER-LILY: an aquatic plant, with thick firm roundiſh leaves, furniſhed with two obtuſe ears at the pedicle, floating on the ſurface of the water: the flowers, which ſtand on ſeparate pedicles, are large, compoſed of ſeveral petala with numerous ſtamina in the middle, followed by ſingle capſules full of blackiſh ſhining ſeeds: the root is long, thick, internally white and fungous.

1. NYMPHÆA ALBA *major C. B. Leuconymphæa. Nenuphar. Nymphæa alba Linn.* White water-lily: with white flowers ſet in four-leaved cups: the ſeed veſſels round, and the roots externally browniſh or blackiſh.

2. NYMPHÆA LUTEA: *Nymphæa major lutea C. B. Nymphæa lutea Linn.* Yellow water-

(a) Philoſophical tranſ. numb. 250.

(b) Chymia medica, &c. i. 717. *Chemical works, p.* 347.

lily:

lily: with yellow flowers ſet in large five-leaved cups, the ſeed veſſels ſhaped like a pear, and the roots externally greeniſh.

Both theſe plants are found in rivers and large lakes; the yellow is moſt common: they are perennial, and flower uſually in June. The roots and flowers have been employed, both internally and externally, as demulcent, anti-inflammatory, and in ſome degree anodyne. Their virtues, however, do not appear to be very great, as they have no ſmell, at leaſt when dried, and but little taſte: extracts made from them both by water and ſpirit are weakly bitteriſh, ſubaſtringent, and ſubſaline. Lindeſtolpe informs us, that in ſome parts of Sweden, the roots, which are the ſtrongeſt part, were in times of ſcarcity uſed as food, and did not prove unwholeſome.

OCHRA.

OCHRA ſive Minera ferri lutea vel rubra Pharm. Pariſ. Ochre: an argillaceous earth; leſs tenacious, when moiſtened, than the clays and the boles; impregnated with a calx of iron, and thereby tinged of a yellow or red colour. The dark red ſort is called reddle or ruddle, *rubrica fabrilis* the yellow *ſil*; *ochra plinio & latinis ſil dicta Charleton.* Thoſe which are naturally yellow become red by burning. Both kinds are dug in ſeveral parts of England.

These earths diſcover their argillaceous nature, by burning hard in the fire; and their ferrugineous impregnation, by digeſtion in aqua regis, which extracts the iron, leaving the earth nearly white. To the taſte they ſeem ſomewhat aſtringent, in conſequence, not of the metallic, but

but of the earthy part, for the iron is in ſuch a ſtate as not to be acted on by any fluid that exiſts in the bodies of animals: it may therefore be preſumed, that they do not differ materially, in virtue, from the boles; except in being leſs viſcid, and therefore of leſs efficacy for obtunding acrid humours: ſee *Bolus* and *Cimolia*. Among us they are rarely or never uſed medicinally under their own name; though ſometimes applied in the ſhops to the counterfeiting of earths that are leſs common.

OCIMUM.

OCIMUM, Baſilicum, Herba regia. BASIL: a plant, with ſquare ſtalks; oval leaves ſet in pairs; and long ſpikes of labiated flowers, whoſe upper lip is divided into four parts, the lower entire: the cup alſo has two lips, one cut into four ſections, the other into two.

1. OCIMUM *vulgatius C. B. Ocymum medium citratum Ger. Ocimum Baſilicum Linn.* Common or citron baſil: with moſt of the leaves indented, and the flower-cups edged with fine hairs.

2. OCIMUM CARYOPHYLLATUM: *Ocimum minimum C. B. & Linn.* Small or buſh baſil: with uncut leaves.

BOTH theſe plants are natives of the eaſtern countries, and ſown annually in our gardens for culinary as well as medicinal uſes. The ſeeds, which rarely come to perfection in this climate, eſpecially thoſe of the ſecond ſort, are brought from Italy and the ſouth of France.

The

The leaves of basil are accounted mildly balsamic: infusions of them are sometimes drank as tea in catarrhous and uterine disorders, and the dry leaves in substance made an ingredient in cephalic and sternutatory powders. They are very juicy, of a weakly aromatic and very mucilaginous taste, and of a strong smell, which is somewhat disagreeable when the herbs are fresh, but is improved by drying: those of the first sort approach to the lemon scent, those of the second to that of cloves. Distilled with water, they yield a considerable quantity of essential oil, of a penetrating fragrance, commended by Hoffman as a nervine, similar, but greatly superiour, to oil of marjoram *(a)*.

* *OENANTHE.*

THIS is the botanical name of a genus of plants of the umbelliferous class, of which there are three species natives of Great Britain. One of these only is known by its effects on the human body, the

OENANTHE *Chærephylli foliis C. B. Oenanthe crocata Linn.* Hemlock dropwort: this is a large umbelliferous plant, growing in ditches and other moist places; with pinnated leaves, resembling those of celery or chervil, and ribbed stalks. Its roots afford the easiest mark of distinction, which are white, thick, and short, and grow several together, forming a kind of bunch.

The hemlock dropwort has long been known as a most dangerous poison; the most virulent, perhaps, that this country produces. Its roots or leaves eaten by mistake, have frequently

(a) Observationes physico-chymicæ, lib. i. *obs.* 4.

proved

proved fatal, occaſioning violent ſickneſs and vomiting, rigors, convulſions, delirium, and other terrible affections of the nervous ſyſtem. The head has been ſaid to be affected even by being in the ſame room with a quantity of the plant. Like ſo many other deleterious vegetables, it, however, is capable of being rendered a powerful remedy. A caſe is publiſhed by Dr. Pulteney in the *Philoſ. Tranſact.* vol. lxii. in which this plant, uſed by miſtake inſtead of the water parſnep, proved remarkably efficacious in removing an inveterate ſcorbutic complaint, which had reſiſted a variety of other remedies. The doſe firſt given was a common ſpoonful of the juice of the root, which at the firſt exhibition produced very alarming effects. This was afterwards reduced to three tea-ſpoonfuls; which quantity was perſiſted in a conſiderable time, and then changed for a tea of the leaves. The medicine never proved purgative, but was diuretic. It always occaſioned a degree of vertigo; accompanied, when the juice itſelf was taken, with nauſea and ſickneſs.

If this experiment be imitated, it is obvious that the greateſt degree of caution will be neceſſary.

OLEA.

OLEA ſativa C. B. Olea europæa Linn. Olive: an evergreen tree, with oblong, narrow, willow-like leaves, and monopetalous whitiſh flowers, cut into four ſections, followed by cluſters of oval black fruit, containing, under a fleſhy pulp, a hard rough ſtone. It is a native of the ſouthern parts of Europe, and bears the ordinary winters of our own climate.

The

The fruit of this tree *(oliva)* has a bitter, auſtere, very diſagreeable taſte: pickled, as brought from abroad, it proves leſs ungrateful, and is ſuppoſed to promote appetite and digeſtion, and attenuate viſcid phlegm in the firſt paſſages: the Lucca olives, which are ſmaller than the others, have the weakeſt taſte; and the Spaniſh, or larger, the ſtrongeſt: thoſe brought from Provence, which are of a middling ſize, are in general moſt eſteemed. But the principal conſumption of olives is in the preparation of the common ſallad oil *(oleum olivarum Pharm. Lond. & Edinb.)* which is obtained by grinding and preſſing them when thoroughly ripe: the finer and purer oil iſſues firſt by gentle preſſure; and inferiour ſorts, on heating the reſiduum and preſſing it more ſtrongly. All theſe oils contain a portion of watery moiſture; and of the mucilaginous ſubſtance of the fruit: to ſeparate theſe, and thus prevent the oil from growing rancid, ſome ſea ſalt is added, which not being diſſoluble in the pure oil, imbibes the watery and mucilaginous parts, and ſinks with them to the bottom. As this oil grows thick in a moderate degree of cold, a part of the ſalt, thrown up by ſhaking the veſſel, is ſometimes detained in it, ſo as to render the taſte ſenſibly ſaline. In virtue, it does not differ materially from the other flavourleſs expreſſed oils: it is preferred to the others for dietetic uſes, and in plaſters and unguents, but is more rarely employed as an internal medicine.

OLIBANUM.

OLIBANUM Pharm. Lond. & Edinb. Olibanum: a gummy reſin brought from Turkey and the Eaſt Indies, uſually in drops or tears like

like thoſe of maſtich, but larger, of a pale yellowiſh colour, which by age becomes reddiſh. It is the product of a tree of the juniper kind growing in Arabia; the *juniperus lycia* of Linnæus.

This gummy-reſin has a moderately ſtrong, not very agreeable ſmell, and a bitteriſh ſomewhat pungent taſte: in chewing, it ſticks to the teeth, becomes white, and renders the ſaliva milky. Laid on a red-hot iron, it readily catches flame, and burns with a ſtrong, diffuſive, not unpleaſant ſmell: it is ſuppoſed to have been the incenſe uſed by the ancients in their religious ceremonies, though it is not the ſubſtance now known by that name in the ſhops. On trituration with water, greateſt part of it diſſolves into a milky liquor, which on ſtanding depoſites a portion of reſinous matter, and being now gently inſpiſſated, leaves a yellow extract, which retains greateſt part of the ſmell as well as the taſte of the olibanum; its odorous matter appearing to be of a leſs volatile kind than that of moſt other gummy-reſins. Rectified ſpirit diſſolves leſs than water, but takes up nearly all the active matter: the tranſparent yellowiſh ſolution, inſpiſſated, yields a very tenacious reſin, in which the active parts of the juice are ſo enveloped and locked up, that they are ſcarcely to be diſcovered, either by the ſmell or taſte.

Olibanum is recommended in diſorders of the head and breaſt, in hæmoptoës, and in alvine and uterine fluxes: the doſe is from a ſcruple to a dram or more.

ONONIS.

ANONIS *ſpinoſa flore purpureo C. B. Reſta bovis. Areſta bovis. Remora aratri. Ononis ſpinoſa*

noſa Linn. REST-HARROW: a plant with flexible branches terminating in ſharp prickles; ſmall oval indented leaves, ſtanding generally three together, without pedicles; and purpliſh papilionaceous flowers, ſet in pairs, followed each by a ſhort pod containing three unequal kidney-ſhaped ſeeds. It is perennial, grows wild in waſte grounds and dry fields, and with its long tough ſpreading roots obſtructs the plough or harrow.

THE roots of reſt-harrow have a faint unpleaſant ſmell, and a ſweetiſh, bitteriſh, ſomewhat nauſeous taſte. Their active matter is confined to the cortical part; which has been ſometimes given in powder, in doſes of a dram, and made an ingredient in apozems or decoctions, as an aperient and diuretic. Its virtue is extracted both by water and ſpirit.

OPIUM.

OPIUM Pharm. Lond. & Edinb. OPIUM: a concrete gummy-reſinous juice; ſomewhat ſoft and tenacious, eſpecially when much handled or warmed; of a dark reddiſh brown colour in the maſs, and when reduced into powder yellow. It is brought from Egypt, Perſia, and ſome other parts of Aſia, in flat cakes or irregular maſſes, from four to about ſixteen ounces in weight, covered with leaves to prevent their ſticking together.

It is extracted from the heads of white poppies (ſee *Papaver*) which in thoſe countries are cultivated in fields for this uſe. Kæmpfer reports, that the heads, when almoſt ripe, are wounded with a five-edged inſtrument, by which as many parallel inciſions are made at once from top to

bottom; that the juice which exudes is next day ſcraped off, and the other ſides of the heads wounded in like manner; and that the juice is afterwards worked with a little water, till it acquires the conſiſtence, tenacity, and brightneſs of the fineſt pitch. The beſt opium was formerly called Thebaic opium, from its being prepared about Thebes in Egypt: no diſtinction is now made in regard to the places of its production, though the epithet *thebaic* ſerves to diſtinguiſh ſome of its officinal preparations.

Opium has a faint diſagreeable ſmell, and a bitteriſh, ſomewhat hot, biting taſte. Watery tinctures of it ſtrike a black colour with chalybeate ſolutions, and thus ſeem to diſcover ſome aſtringency. Mixed with the ſerum of blood, they thicken and render it whitiſh; and on blood itſelf, newly drawn, they have nearly a like effect: Mr. Eller obſerves, that on examining with a microſcope blood thickened by a vinous tincture of opium, the nature of its globules ſeemed to be deſtroyed. But neither from theſe, nor any of the other known ſenſible properties of this drug, can its ſurprizing operation in the human body be deduced.

Taken in proper doſes, it commonly procures ſleep, and a temporary reſpite from pain, or the action of any ſtimulating power. The cauſe of the pain it in many caſes confirms or augments; and in not a few, it fails even of giving palliating relief. The caſes in which it is proper or improper will be beſt underſtood from a view of its general effects; which, ſo far as experience has hitherto diſcovered them, are the following.

It renders the ſolids, while the operation of the opium continues, leſs ſenſible of every kind of

of irritation, whether proceeding from an internal cauſe, or from acrimonious medicines, as cantharides, and the more active mercurials, of which it is the beſt corrector—It relaxes the nerves; abating or removing cramps or ſpaſms, even thoſe of the more violent kind; and increaſing paralytic diſorders and debilities of the nervous ſyſtem—It incraſſates thin ſerous humours in the fauces and adjacent parts; by which means, it proves frequently a ſpeedy cure for ſimple catarrhs and tickling coughs; but in phthiſical and peripneumonic caſes, dangerouſly obſtructs expectoration, unleſs this effect be provided againſt by ſuitable additions, as ammoniacum and ſquills—It produces a fulneſs and diſtenſion of the whole habit; and thus exaſperates inflammations both internal and external, and all plethoric ſymyptoms—It promotes perſpiration and ſweat; but reſtrains all other evacuations, unleſs when they proceed from a relaxation and inſenſibility of the parts, as the colliquative diarrhœæ in the advanced ſtage of hectic fevers—It promotes labour-pains and delivery *(a)* more effectually than the medicines of the ſtimulating kind uſually recommended for that purpoſe; partly perhaps by increaſing plenitude, and partly by relaxing the ſolids or taking off ſpaſmodic ſtrictures—And indeed all the preceding effects are perhaps conſequences of one general power, being nearly allied to thoſe which natural ſleep produces *(b)*.

The operation of opium is generally accompanied with a ſlow but ſtrong and full pulſe, and a ſlight redneſs, heat and itching of the ſkin: it is followed by a weak and languid pulſe,

(a) Mead, *Monita & præcept. med. p.* 253.

(b) See Young's *treatiſe on opium.*

lowneſs of the ſpirits, ſome difficulty of breathing or a ſenſe of tightneſs about the breaſt, a ſlight giddineſs of the head, dryneſs of the mouth and fauces, and ſome degree of nauſea. Given on a full ſtomach, it commonly occaſions a nauſea from the beginning, which continues till the opium is rejected along with the contents of the ſtomach. Where the evacuation of acrid humours, accumulated in the firſt paſſages, is ſuppreſſed by it, great ſickneſs and uneaſineſs are generally complained of, till the ſalutary diſcharge either takes place again ſpontaneouſly or is promoted by art.

An over doſe occaſions either immoderate mirth or ſtupidity, a redneſs of the face, ſwelling of the lips, relaxation of the joints, vertigo, deep ſleep with turbulent dreams and ſtartings, convulſions, and cold ſweats. Geoffroy obſerves, that thoſe who recover, are generally relieved by a diarrhœa, or by a profuſe ſweat, which is accompanied with a violent itching. The proper remedies, beſides emetics, bliſters, and bleeding, are acids and neutral mixtures: Dr. Mead ſays he has given, with extraordinary ſucceſs, repeated doſes of a mixture of ſalt of wormwood with lemon juice.

A long continued uſe of opium is productive of great relaxation and debility, ſluggiſhneſs, heavineſs, loſs of appetite, dropſies, tremors, acrimony of the humours, frequent ſtimulus to urine, and propenſity to venery. On leaving it off, after habitual uſe, an extreme lowneſs of the ſpirits, languor, and anxiety, ſucceed; which are relieved by having again recourſe to opium, and in ſome meaſure by ſpirituous or vinous liquors.

With

With regard to the dose, one grain is generally a sufficient, and sometimes too large a one: maniacal persons, and those who labour under violent spasms, require oftentimes two, three, or more grains; though even in these cases, it is generally more advisable to repeat the dose at proper intervals, than to enlarge it. By frequent use, much greater quantities may be borne: the Turks, who habituate themselves to opium as a succedaneum to spirituous liquors, are said to take commonly a dram at a time, and Garcias says that he knew one who every day took ten drams.

Opium appears to consist of about five parts in twelve of gummy matter, four of resinous matter, and three of earthy or other indissoluble impurities *(a)*. From these last it has been purified, in the shops, by softening the opium with boiling water, in the proportion of a pint to a pound, into the consistence of a pulp, with care to prevent its burning; and whilst it remains quite hot, strongly pressing it from the feces through a linen cloth: the strained opium is then inspissated in a water-bath, or other gentle heat, to its original consistence. When thus softened with a small quantity of water, the gummy and resinous parts pass the strainer together; whereas, if dissolved by a larger quantity, they would separate from one another.

* A more perfect method of purification is now directed by the London college, which consists in dissolving one pound of opium in twelve pints of proof spirit, straining the solution, and then distilling the spirit from it, till it be reduced to a due consistence. This preparation is ordered

Opium purificat. *Ph. Lond.*

(a) Alston, *Edinburgh medical essays, vol.* v. *art.* 12.

to be kept in a ſoft form, for making pills, and a hard one, for powdering.

It has been diſputed, whether it is in the gummy or in the reſinous parts of opium, that its activity reſides. From the experiments of Hoffman *(a)* and Neumann *(b)*, it ſeems to be neither in the direct gum, nor in the direct reſin, but in a certain ſubtile part of the reſinous matter, ſomewhat analogous to eſſential oils, but of a much leſs volatile kind: they report, that on boiling the opium in water, there ariſes to the ſurface a frothy, viſcid, unctuous, ſtrong-ſcented ſubſtance, to the quantity of two or three drams from ſixteen ounces: that this ſubſtance, in the doſe of a few grains, has killed dogs that could bear above a dram of crude opium; that in diſtillation with water, though it does not riſe itſelf, it gives over, at leaſt in part, the active principle of which it is the matrix; impregnating the diſtilled liquor with its ſcent and its ſoporific power; as eſſential oils exhale their odoriferous principle in the air, without being diſſipated themſelves. What this ſubtile and highly active principle really is, in eſſential oils, in odorous vegetables that yield no oil, and in opium, is equally unknown.

Both water and rectified ſpirit extract, difficultly, by maceration or digeſtion, the active matter of opium, and receive from it a yellow or browniſh tincture. The watery ſolution is found to contain great part of the reſin along with the gum; and the ſpirituous, a ſmaller proportion of the gum along with the reſin. Such part of the gum as is left by ſpirit, and ſuch part of

(a) Diſſ. de opii correctione genuina & uſu, Oper. ſupplement. ii. *P.* i. *p.* 645. *Not. ad Poterium, p.* 437.

(b) Chymia medica, vol. i. *p.* 996. *Chemical works, p.* 308.

the

the reſin as is left by water, ſeem to be equally inert.

Tinctures of opium in water, wine, and proof ſpirit, have the ſame effects as the opium in ſubſtance; with this difference, that they exert themſelves ſooner in the body, and are leſs diſpoſed to leave a nauſea on the ſtomach. Tinctures made in rectified ſpirit are ſaid to act with greater power than the others: Geoffroy relates, from his own obſervation, that while the watery and vinous tinctures occaſioned quiet ſleep, the ſpirituous brought on a phrenzy for a time. It is ſaid likewiſe, that alkaline ſalts diminiſh the ſoporific virtue of the opium; that fixt alkalies render it diuretic, whilſt volatile ones determine its action to the cutaneous pores; and that acids almoſt entirely deſtroy its force.

The officinal tinctures of opium are made in wine or proof ſpirit. The college of London directs ten drams of ſtrained opium, dried and powdered, to be macerated without heat for ten days in a pint of proof ſpirit: the college of Edinburgh orders two ounces of crude opium to be digeſted for four days in a pound and a half of ſpirituous cinnamon water: a mixture of wine and proof ſpirit has been ſometimes made choice of, in order to prevent in ſome meaſure an inconvenience which both of them ſeparately, conſidered as officinals, are liable to, being apt to throw off in long ſtanding a part of the opium, which in wine falls to the bottom, and forms a cruſt on the ſurface of ſpirit. Of the firſt of the above tinctures twenty drops, and of the latter twenty-five drops are reckoned to contain one grain of opium:* but as theſe quantities of the menſtrua

Tinctur. opii *Ph. Lond.*

Tinctura thebaica vulgo laudanum liquidum *Ph. Ed.*

* *(a)* This calculation refers to the preceding editions of the diſpenſatories. The London college have apparently much

menſtrua do not eaſily diſſolve all the active matter of ſo large a proportion of the opium, thoſe doſes are generally obſerved to have ſomewhat leſs effect than a grain of the drug in ſubſtance. As drops alſo, according to different circumſtances, vary in quantity, though in number the ſame, it were to be wiſhed that the ſhops were furniſhed with a ſolution of this drug, made in a quantity of menſtruum large enough not only for the complete extraction of the active parts, but to admit of the doſe being exactly determined by weight or meaſure.

In a ſolid form, independently of ſuch materials as may be ſubſervient to the other indications of cure, it is ſometimes mixed with ſponaceous or gummy ſubſtances which promote its diſſolution in the ſtomach, and ſometimes with reſinous ones, which render its diſſolution and operation more gradual and ſlow: to theſe is commonly ſuperadded ſome aromatic ingredient, to prevent its occaſioning a nauſea.

*The London and Edinburgh colleges have now, however, preſerved only a ſingle form each of opiate pills, in which the promotion of its ſolubility ſeems the only ſubject conſidered.

Pil. ex opio *Ph. Lond.* The former unites two drams of hard ſtrained opium with one ounce of extract of liquorice.

Pil. thebaicæ *vulgo* pacificæ *Ph. Ed.* The latter directs the combination of one part of opium, four of extract of liquorice, three of Spaniſh ſoap, and two of powdered Jamaica pepper.

much diminiſhed the quantity of opium in their tinctures as it was formerly made with two ounces of ſtrained opium to the pint. But it is probable that they have found by experiment that the loſs of weight in drying the opium to powder is equivalent to the difference. By uſing this drug in powder, the difference of ſtrength reſulting from the unavoidable difference of conſiſtence in various parcels of the crude or ſtrained opium, is obviated.

Many

Many have endeavoured to correct certain ill qualities, which they ſuppoſe opium to be poſſeſſed of, by roaſting it, by fermentation, by long continued digeſtions, or boiling, by repeated diſſolutions and diſtillations. Theſe kinds of proceſſes, though recommended by ſeveral late writers, do not promiſe any ſingular advantage. That they weaken the opium is indeed very probable; but this intention is anſwered as effectually, and with far greater certainty, by diminiſhing the doſe of the opium itſelf: for the ill effects, which opium produces in certain circumſtances, do not depend on any diſtinct property or principle, and appear to be no other than the neceſſary conſequences of the ſame power, by which in other circumſtances it proves ſo beneficial: the only rational way of improving or correcting this valuable drug ſeems to be, by joining or interpoſing ſuch medicines, as may counteract or remove thoſe particular effects of it, which in particular caſes may be injurious.

OPOBALSAMUM.

Opobalsamum or Balsam of Gilead: a reſinous juice, obtained from an evergreen tree or ſhrub *(balſamum ſyriacum rutæ folio C. B.)* ſaid to grow in Arabia. The beſt ſort, which naturally exudes from the plant, is ſcarce known in Europe; and the inferiour kinds, ſaid to be extracted by lightly boiling the branches and leaves in water, are very rarely ſeen among us.

The true opobalſam, according to Proſper Alpinus, is at firſt turbid and white, of a very ſtrong pungent ſmell, like that of turpentine; but much ſweeter and more fragrant, and of a bitter,

bitter, acrid, aſtringent taſte: on being kept for ſome time, it becomes thin, limpid, light, of a greeniſh hue, and then of a gold yellow, after which it grows thick like turpentine, and loſes much of its fragrance *(a)*. Some reſemble the ſmell of this balſam to that of citrons, others to that of a mixture of roſemary and ſage flowers. I have ſometimes met with a curious balſam of this laſt kind of ſmell, exceedingly fragrant, limpid, and thin: dropt on water, it ſpread itſelf all over the ſurface, imparting to the liquor a conſiderable ſhare of its taſte and ſmell: the groſſer part, that remained on the top of the water, was ſo tenacious, as to be eaſily taken up at once with the point of a needle, which is reckoned, by Alpinus and others, as a characteriſtic of the true balſam.

This precious balſam is of great eſteem in the eaſtern countries, both as a medicine, and as an odoriferous unguent and coſmetic. Its great ſcarcity has prevented its coming into uſe among us: nor are its virtues, probably, ſuperiour to thoſe of ſome of the reſinous juices more common in the ſhops; all theſe ſubſtances being in their general qualities alike, though differing in the degree of their gratefulneſs, pungency, and warmth.

OPOPANAX.

OPOPANAX Pharm. Lond. Opopanax: a concrete gummy-reſinous juice, obtained from the roots of an umbelliferous plant, which grows ſpontaneouſly in the warmer countries, and bears the colds of our own *(Paſtinaca opopanax Linn.)* The juice is brought from Turkey and

(a) Vide Alpini *dialogum de balſamo.*

the

the Eaſt Indies, ſometimes in little round drops or tears, more commonly in irregular lumps, of a reddiſh yellow colour on the outſide with ſpecks of white, internally of a paler colour and frequently variegated with large white pieces.

THIS gummy-reſin has a ſtrong diſagreeable ſmell, and a bitter, acrid, ſomewhat nauſeous taſte. It readily mingles with water, by triture, into a milky liquor, which on ſtanding depoſites a portion of reſinous matter and becomes yelloviſh: to rectified ſpirit it yields a gold-coloured tincture, which taſtes and ſmells ſtrongly of the opopanax. Water diſtilled from it is impregnated with its ſmell, but no eſſential oil is obtained on committing moderate quantities to the operation.

Opopanax is an uſeful attenuant and deobſtruent, and in conſiderable doſes looſens the belly. It is given from a ſcruple to a dram, in the ſame intentions as ammoniacum or galbanum; and joined in ſmaller doſes as an auxiliary to thoſe and the other deobſtruent gums.

ORIGANUM.

ORIGANUM Pharm. Lond. Origanum ſilveſtre, cunila bubula plinii C. B. Agrioriganum ſive onitis major Lob. Origanum anglicum Ger. Origanum vulgare Linn. ORIGANUM or WILD MARJORAM: a plant with firm round ſtalks, and oval, acuminated, uncut, ſomewhat hairy leaves, ſet in pairs upon ſhort pedicles: on the tops grow ſcaly heads of pale red labiated flowers, whoſe upper lip is entire and the lower cut into three ſegments, ſet in form of a convex umbel, intermixed with roundiſh purpliſh leaves; each flower is followed by four minute ſeeds incloſed in

in the cup. It is perennial, grows wild on dry chalky hills and gravelly grounds, in ſeveral parts of England, and flowers in June. The flowers, or rather flowery tops, of a ſomewhat different ſpecies, *origanum creticum*, were formerly brought from Candy, but have long given place to thoſe of our own growth, which are nearly of the ſame quality.

THE leaves and flowery tops of origanum have an agreeable aromatic ſmell, and a pungent taſte, warmer than that of the garden marjoram, and much reſembling thyme; with which they appear to agree in medicinal virtue. Infuſions of them are ſometimes drank as tea, in weakneſs of the ſtomach, diſorders of the breaſt, for promoting perſpiration and the fluid ſecretions in general: they are ſometimes uſed alſo in nervine and antirheumatic baths; and the powder of the dried herb as an errhine. Diſtilled with water, they yield a moderate quantity of a very acrid penetrating eſſential oil, ſmelling ſtrongly of the origanum, but leſs agreeable than the herb itſelf: this oil is applied on a little cotton for eaſing the pains of carious teeth; and ſometimes diluted and rubbed on the noſtrils, or ſnuffed up the noſe, for attenuating and evacuating mucous humours.

OSTEOCOLLA.

OSTEOCOLLA, aliis oſſifragus, oſteites, ammoſteus, oſteolithos, holoſteus, ſtelochites, Worm. muſ. OSTEOCOLLA, or BONE-BINDER: a foſſil ſubſtance, found in ſome parts of Germany, particularly in the marchè of Brandenburgh, and in other countries. It is met with in looſe ſandy grounds, ſpreading, from near the ſurface

to

to a conſiderable depth, into a number of ramifications like the roots of a tree: it is of a whitiſh colour, ſoft while under the earth, friable when dry, rough on the ſurface, for the moſt part either hollow within, or filled with ſolid wood, or with a powdery woody matter *(a)*.

THIS earth has been celebrated for promoting the coalition of fractured bones and the formation of a callus; a virtue to which it does not ſeem to have any claim. It is found to be compoſed of two different earthy ſubſtances, which are nearly in equal proportions, and which may be ſeparated from one another, by waſhing the powdered oſteocolla with water: the finer matter, which waſhes over, appears from its burning into quicklime, and its properties in other experiments, to be mere calcareous earth, not different in quality from chalk: the groſſer matter that remains is no other than ſand.

OSTREUM.

THE OYSTER; a common, bivalvous, marine ſhell fiſh.

THE ſhell of the oyſter, levigated into a ſubtile powder, is employed as an abſorbent, in heart-burns and other like complaints ariſing from acidities in the firſt paſſages: the hollow ſhells are generally made choice of, as containing more, than the thinner flat ones, of the fine white earth, in proportion to the outer rough coat, which laſt is found to be conſiderably

Teſtæ oſtreorum prepar. *Ph. Lond.*

(a) A more particular account of this foſſil may be ſeen in *Neumann's chemical works, p.* 11. and the *Memoires de l'academie royale des ſciences de Berlin, pour l'ann.* 1748.

impregnated

impregnated with ſea ſalt. By calcination, they are converted into a ſtrong quicklime, which imparts to water a greater degree of lithontriptic power than the mineral limes; ſee *Calx viva.*

OVUM.

OVUM gallinaceum Pharm. Lond. HENS EGG.

EGGS are accounted very nutritious, but difficult of digeſtion, eſpecially if boiled hard. In medicine, the yolk has been employed as an intermedium for rendering reſinous juices and balſams ſoluble in water: it anſwers this purpoſe leſs effectually, and leſs elegantly than vegetable gums, the ſolutions obtained by means of the animal matter being apt on ſtanding to become putrid or rancid. The yolk, exſiccated by a gentle warmth, forms a friable concrete; the white, a firm ſemitranſparent one, in appearance reſembling amber or gum-arabic, and ſoluble again in watery liquors. The boiled white, placed in a moiſt cellar, deliquiates ſpontaneouſly, and gummy-reſinous ſubſtances, included in it, diſſolve along with it: preparations of this kind have been directed for medicinal uſes, but it does not appear that more of the gummy-reſin is thus diſſolved by the liquamen of the egg than by ſimple water.

The ſhells of eggs, freed, after boiling, from the inner ſkin, and levigated into fine powder, are ſometimes uſed as abſorbents, and ſuppoſed, when combined with the acid humours in the firſt paſſages, to be leſs diſpoſed to bind the belly than moſt of the other teſtaceous powders.

PÆONIA.

PÆONIA folio nigricante ſplendido quæ mas, & pæonia femina flore pleno rubro majore C. B. Pæonia officinalis Linn. MALE and FEMALE PEONY or PIONY: a plant with large leaves, divided deeply into oblong ſegments, or rather compoſed of a number of theſe ſegments ſet on divided pedicles: on the tops of the branches grow large roſe-like flowers, followed each by two or more horned pods, internally of a deep red colour, containing roundiſh ſhining red or black ſeeds. The male ſort has dark green leaves, pale red ſingle flowers, long thick roots, and the ſtalks and pedicles ſtreaked with red: the female has longer, narrower, and paler leaves, deep red double flowers, and irregular roots compoſed of ſeveral tuberous pieces hanging by tough filaments from one head. They are both found wild in ſome parts of Europe, and cultivated with us in gardens: they are perennial, produce their flowers in May, and very ſoon ſhed them.

THE male peony has been generally preferred for medicinal uſe: but the female, which is the largeſt and moſt elegant, and for this reaſon the moſt common, is the ſpecies which the ſhops have been principally ſupplied with. In quality, there does not appear to be any material difference betwixt the two; and hence the college allow both ſorts to be taken indiſcriminately.

The roots and ſeeds of peony have, when freſh, a faint unpleaſant ſmell, ſomewhat of the narcotic kind: and a mucilaginous ſubacrid taſte, with a ſlight degree of bitteriſhneſs and aſtringency.

aſtringency. In drying, they loſe their ſmell, and part of their taſte. Extracts made from them by water are almoſt inſipid as well as inodorous; but extracts made by rectified ſpirit are manifeſtly bitteriſh and conſiderably aſtringent.

The leaves are nearly inodorous. To the taſte, the leaves themſelves diſcover a moderate degree of roughneſs, and their pedicles of ſweetneſs; both which are preſerved in great meaſure in the watery, but more perfectly in the ſpirituous extracts.

The flowers have rather more ſmell than any of the other parts of the plant, and a rough ſweetiſh taſte, which they impart, together with their colour, both to water and ſpirit: the watery infuſion leaves, on being inſpiſſated, a blackiſh red, auſtere, ſweetiſh, and ſomewhat bitteriſh extract: the ſpirituous tincture yields an extract of a beautiful bright red, of an agreeable though weak ſmell, a moderate aſtringency, and an almoſt ſaccharine ſweetneſs.

The roots, flowers, and ſeeds, are looked upon as lightly anodyne and corroborant; to the latter, at leaſt, of which virtues, they appear from the above experiments to have ſome claim. They have been principally recommended in ſpaſmodic and epileptic complaints; in which, we are afraid, their effects are not very conſiderable.

PALMA.

PALM: a tall unbranched tree, with long reed-like leaves elegantly diſpoſed on the top. Different ſpecies of it grow ſpontaneouſly in the eaſtern countries, and in the warmer parts of the Weſt Indies.

THE

The *palma major C. B. Phœnix dactylifera Linn.* is cultivated in ſome of the ſouthern parts of Europe. Its fruit, the dates of the ſhops, is of an oblong ſhape, like an acorn, but generally larger; and conſiſts of a thick fleſhy ſubſtance including, and freely parting from, an oblong hard ſtone, which has a remarkable furrow running its whole length upon one ſide. The beſt dates come from Tunis: they ſhould be choſen large, ſoftiſh, not much wrinkled, of a reddiſh yellow colour on the outſide, with a whitiſh membrane betwixt the fleſh and the ſtone. They have an agreeable ſweet taſte, accompanied with a ſlight aſtringency; and hence ſtand recommended in tickling coughs and thin acrid defluxions on the lungs, and in alvine fluxes. Among the Egyptians and Africans, they are ſaid to be a principal article of food, and when uſed too freely, to be difficult of digeſtion, occaſion head-achs, ſometimes gripes, and, in length of time, obſtructions of the viſcera, cachectic, and melancholic diſorders.

The *palma oleoſa (palma foliorum pediculis ſpinoſis, fructu pruniformi luteo oleoſo Sloan. jam.)* is a native of the coaſt of Guinea*(a)* and the Cape Verd iſlands, from whence it has been introduced into Jamaica and Barbadoes. From its fruit is extracted an oil, which, as brought to us, is about the conſiſtence of an ointment, of a ſtrong, not diſagreeable ſmell, and ſcarcely any particular taſte: by long keeping it loſes its high colour, and becomes white, and in this ſtate is to be rejected. The inhabitants of the

Oleum expreſſum palmæ *Ph. Ed.*

*(a) According to Bergius, another ſpecies of the oil palm grows on the coaſt of Guinea and in Senegal, the *palma altiſſima non ſpinoſa, fructu pruniformi minore, racemo ſparſo Sloan. Jam. & Adanſon.*

Guinea coaſt are ſaid to employ the palm oil for the ſame purpoſes as we do butter. With us, it is only uſed in ſome external applications, for pains and weakneſs of the nerves, cramps, ſprains, and other like complaints. The common people ſometimes apply it to chilblains; and, when uſed early, not without benefit. It is ſaid to be peculiarly ſerviceable in hardneſs of the belly, both of adults and children. *(a)*

THE medullary part of certain oriental palm trees *(palma indica caudice in annulos protuberantes diſtincto, fructu pruniformi, Raii. Sagus, ſeu palma farinaria Rumph. Amb. (b)* affords another article of food to the natives, and of the materia medica to us. The farinaceous medulla, freed from the filamentous matter with which it is enveloped, is beaten with water, and made into cakes, which are afterwards reduced into ſmall grains, and dried. The cakes are ſaid to be the bread uſed by the Indians in ſcarcity of rice: the grains are the ſago or ſagou of the ſhops. This ſubſtance, commonly recommended as a reſtorative in phthiſes and emaciations and for reſtraining fluxions, appears to be a light, moderately nutritious demulcent food; in which view it is by ſome directed *(c)* as a proper aliment for young children, in preference to the more tenacious and leſs digeſtible preparations of wheat flour. It diſſolves in water into a viſcid mucilage; is leſs aceſcent and flatulent than other farinæ; keeps longer in the grain, even for twenty years in a dry place, and alſo in its mucilaginous ſtate a long time *(d)*.

(a) Bergii Mat. Med. 882.

* *(b)* The *Cycas circinalis Linn.* has been given as the ſago plant, but, as Bergius ſuppoſes, erroneouſly.

(c) Albertus Seba, *Theſaur. vol.* i. *p.* 40. *Act. nat. curioſ. vol.* i. *Append.* *(d) Cullen, Mat. Med.*

PAPA-

PAPAVER.

POPPY: a plant with oblong leaves and round ſtalks, divided into a few branches, each of which is terminated by a large tetrapetalous flower, ſet in a two-leaved cup that falls off as the flower opens: the flower itſelf likewiſe ſoon falls, leaving a ſmooth roundiſh head or capſule, covered with a radiated crown, and containing a number of ſmooth roundiſh ſeeds. It is annual, and flowers from June to near the end of ſummer.

1. PAPAVER ALBUM *Pharm. Lond. & Edinb. Papaver hortenſe ſemine albo C. B. Papaver ſomniferum Linn.* White poppy: with ſmooth, ſlightly indented leaves; and whitiſh flowers and ſeeds.

2. PAPAVER NIGRUM: *Papaver hortenſe nigro ſemine C. B.* Black poppy: a variety of the former, with ſmooth, ſlightly indented leaves, purple flowers, and black ſeeds.

THESE plants are found wild in ſome parts of Europe; and ſeveral varieties of them, in regard to the flowers, are produced by culture in our gardens. The heads, ſtalk, and leaves, have an unpleaſant ſmell, and a bitteriſh biting taſte, of the ſame kind with thoſe of opium. Their ſmell and taſte is lodged in a milky juice; which abounds chiefly in the cortical part of the heads; which may be collected, in conſiderable quantity, by ſlightly wounding them when almoſt ripe; and which, on being expoſed for a little time to a warm air, thickens into a tenacious dark-coloured maſs, ſimilar to the opium

brought from abroad, but ſtronger in ſmell and taſte. The juices thus obtained from the two ſorts of poppies, appear to be of the ſame quality, the difference being only in the quantity afforded: the white poppy, which is the largeſt, is the ſort cultivated by the preparers of opium in the eaſtern countries, and for medicinal uſes in this. *The following extract from Mr. Kerr's account of the culture of this plant, and the preparation of opium, in the province of Bahar in the Eaſt Indies, may convey uſeful information.

"The ſeeds are ſown in October or November. The plants are allowed to grow ſix or eight inches diſtant from each other, and are plentifully ſupplied with water. When the young plants are ſix or eight inches high, they are watered more ſparingly. But the cultivator ſtrews all over the areas a nutrient compoſt of aſhes, human excrements, cow-dung, and a large portion of nitrous earth, ſcraped from the highways, and old mud-walls. When the plants are nigh flowering, they are watered profuſely to increaſe the juice.

"When the capſules are half grown, no more water is given, and they begin to collect the opium. At ſun-ſet they make two longitudinal double inciſions upon each half-ripe capſule, paſſing from below upwards, and taking care not to penetrate the internal cavity of the capſule. The inciſions are repeated every evening, until each capſule has received ſix or eight wounds; they are then allowed to ripen their ſeeds. The ripe capſules afford little or no juice. If the wound was made in the heat of the day, a cicatrix would be too ſoon formed. —The night-dews, by their moiſture, favour the exſtillation of the juice. Early in the morning

ing old women, boys, and girls, collect the juice, by scraping it off the wounds with a small iron scoop, and deposite the whole in an earthen pot, where it is worked by the hand in the open sun-shine, until it becomes of a considerable spissitude: it is then formed into cakes of a globular shape, and about four pounds in weight, and laid into little earthen basins to be further exsiccated. These cakes are covered over with the poppy or tobacco leaves, and dried until they are fit for sale. Opium is frequently adulterated with cow-dung, the extract of the poppy-plant procured by boiling, and various other substances which they keep in secrecy."*(a)*

The collection of the pure milky juice of the poppy has not, among us, been as yet practised in large, or with a view to the supplying of the common demand of opium. Instead of this troublesome process, we extract the narcotic matter by menstrua; the active parts of opium, as observed under that article, being completely dissoluble both by water and rectified spirit. A portion of the herbaceous inert substance of the plant is indeed, at the same time, taken up, at least when water is made use of, so as to render an enlargement of the dose necessary: but this addition to the bulk of a dose of opium would be of no inconvenience, if the compound was always of the same strength, or the narcotic and inert matter in the same proportions to one another; a point which cannot be attained with so much precision as could be wished, but which may nevertheless, by due care in the preparation, be adjusted as nearly as common practice in most cases requires.

(a) Lond. Med. Obs. and Inq. vol. v. *p.* 318.

The college of London directs the dried heads, cut and cleared from the seeds, to be boiled in water, in the proportion of three pounds and a half to eight gallons, in the heat of a brine bath, till it is reduced to three gallons: the liquor is then to be expressed, and boiled down to four pints, which is to be strained hot, first through a sieve, and then through a thin woollen cloth, and set by for twelve hours, that the dregs may subside. The liquor poured off clear is to be reduced to three pints, in which six pounds of sugar are to be dissolved. An ounce of this syrup is reckoned equivalent to about a grain of opium. *The Edinburgh college directs two pounds of poppy heads without the seeds to be macerated for a night in thirty pounds of boiling water, the liquor then boiled down till only a third part remains, which is to be strongly expressed and strained, then boiled again to the half, strained, and made into a syrup with a sufficient quantity of sugar. They also allow this syrup to be made by dissolving one dram of the extract of white poppy heads in two pounds and a half of simple syrup.

Syr. Papav. alb. *Ph. Lond.*

Syrupus papaveris albi, *seu* de meconio, *vulgo* diacodion *Ph. Ed.*

A decoction of poppy heads in water, strongly pressed out, depurated by settling, then clarified with whites of eggs, and inspissated, yields an extract amounting to one fifth or one sixth the weight of the heads: it is said, that two grains of this preparation are equivalent to one grain of opium, and that the extract is not liable to produce a nausea or giddiness which generally follow the use of pure opium *(a)*: but the consequential effects which opiates produce, in different subjects, and in different circumstances, are so variable, that the trials which have been

Extract. capitum papaveris albi *Ph. Ed.*

(a) Mr. Arnot, *Edinburgh medical essays, vol.* v. *art.* 11.

made

made of this preparation, however ſucceſsful, do not appear ſufficient for eſtabliſhing this ſuperiority. Of tinctures or extracts made with ſpirituous menſtrua, no medicinal trials, ſo far as I can learn, have as yet been made: in ſmell and taſte they approach more to opium than any other preparation of the poppy I have ſeen.

Many have ſuppoſed the ſeeds of the poppy to be, like the other parts of the herb, narcotic(*a*); miſled, perhaps, by analogical reaſoning from other plants. Though the ſeeds of many plants are more efficacious than the veſſel in which they are lodged; thoſe of the poppy have nothing of the narcotic juice which is diffuſed through their covering, through the ſtalks, and more ſparingly through the leaves. If emulſions of poppy ſeeds have been found ſerviceable in coughs, catarrhs, heat of urine, and other like diſorders; it is not to an anodyne, but an emollient quality, that this virtue is to be aſcribed. The ſeeds in ſubſtance have a ſweetiſh unctuous farinaceous taſte, and yield upon expreſſion a large quantity of inſipid oil: both the ſeeds themſelves and the oil are ſaid to be in ſome places common articles of food(*b*).

3. PAPAVER ERRATICUM *Pharm. Lond. Papaver erraticum majus C. B. Papaver Rhœas Linn.* Wild or red poppy, or corn-roſe: with deep red flowers, dark-coloured ſeeds, hairy leaves and ſtalks, and the leaves cut almoſt, or quite, to the pedicle into indented ſegments. It

(*a*) Hermann, *Cynoſur. mat. med. edit. Boecler, p.* 436. Juncker, *Conſpectus therapiæ generalis, p.* 279.

(*b*) Proſper Alpinus, *De medicina Ægyptiorum, lib.* iv. *cap.* 1. Geoffroy, *Mat. med. tom.* ii. *p.* 715. Linnæi, *Amœnitat. Academic.* iii. 71.

is common in corn-fields; and is ſometimes, like the others, made to vary its flowers by culture.

The heads of this ſpecies appear to contain the ſame kind of narcotic juice with thoſe of the two preceding, but in ſo much ſmaller quantity that they are wholly neglected. The only part made uſe of is the flowers, which are ſuppoſed to be likewiſe impregnated in ſome degree with the ſame anodyne principle, and ſtand recommended in catarrhs, coughs, ſpitting of blood, and other diſorders: they have a ſlight narcotic ſmell, and a very mucilaginous taſte, accompanied with a ſenſible bitteriſhneſs. They are at preſent regarded rather on account of their colour, than for any great virtues expected from them: they yield upon expreſſion a deep red juice, and impart the ſame colour to watery liquors, and a brighter though paler red to rectified ſpirit. A ſtrong infuſion of them is prepared in the ſhops, by pouring four pints and a half of boiling water upon four pounds of the freſh flowers, ſtirring them over the fire till the flowers are all immerged, and ſetting them by to ſteep for a night: without the application of fire ſo as to ſcald or ſhrink the flowers a little, they can ſcarcely be moiſtened with the water; if the heat is continued longer than this effect is produced, the liquor turns out quite ſlimy. This infuſion, preſſed out and depurated by ſettling, is reduced, by a proper addition of ſugar, into a deep red ſyrup. The colouring matter of the red poppy differs from that of clove-gilly flowers, red roſes, and other bright red flowers, in this; that on the admixture of alkaline liquors, it does not change, like them, to a green, but to a dark purple.

Syr. papav. errat. *Ph. Lond.*

PARA-

PARALYSIS.

PARALYSIS: a plant with oblong wrinkled leaves, hairy on the upper ſides of the ribs; and naked ſtalks, bearing monopetalous flowers, each of which is divided about the edge into five ſegments, and ſet in a looſe tubulous, ridged cup, which, after the flower has fallen, incloſes a huſk full of roundiſh ſeeds. It is perennial, aud flowers early in the ſpring.

1. VERBASCULUM *pratenſe odoratum C. B. Primula veris major Gerard. Primula veris officinalis Linn.* Cowſlip, paigil, or peagle: with ſeveral flowers ſet together on one ſtalk, of a deep yellow colour, drooping downwards. It grows wild in marſhes and moiſt meadows.

COWSLIP FLOWERS have a moderately ſtrong pleaſant ſmell, and a ſomewhat roughiſh bitteriſh taſte; both which they impart, together with a yellow tincture, to watery and to ſpirituous menſtrua. Vinous liquors, impregnated with their flavour by maceration or fermentation, and ſtrong infuſions of them drank as tea, are ſuppoſed to be mildly corroborant, antiſpaſmodic, and anodyne. An infuſion of three pounds of the freſh flowers in five pints of boiling water is made in the ſhops into a ſyrup, of a fine yellow colour, and agreeably impregnated with the flavour of the cowſlips.

2. PRIMULA VERIS *minor Ger. Verbaſculum ſilveſtre majus ſingulari flore C. B. Primula veris acaulis Linn.* Primroſe: with pale yellow ſolitary flowers. It grows wild in woods and hedges.

THE

The flowers of this ſpecies are much weaker and leſs agreeable in ſmell than thoſe of the preceding. The leaves and the roots ſeem to partake in ſome degree of the nature of thoſe of aſarum; acting as ſtrong errhines or ſternutatories, when ſnuffed up the noſe, and as emetics (the roots at leaſt) when taken internally. Gerard reports, as from the experience of a ſkilful practitioner, that "a dram and a half of the powder of the dried roots (taken up in autumn) purgeth by vomit very forcibly, but ſafely, in ſuch manner as aſarum doth."

PAREIRA.

PAREIRA BRAVA Pharm. Lond. Pareyra, Ambutua, Butua, Overo brutua, Zan. hiſt. Pharm. Pariſ. Pareira brava: the root of an American climbing plant (*convolvulus braſilianus flore octopetalo monococcos Raii hiſt. Ciſſampelos Pareira Linn.*) brought from Brazil, generally in crooked pieces of different ſizes, ſome no bigger than the finger, others as large as a child's arm: the outſide is browniſh and variouſly wrinkled; the internal ſubſtance of a pale dull yellowiſh hue, and interwoven as it were with woody fibres, ſo that on a tranſverſe ſection, there appears a number of concentric circles, croſſed with ſtriæ running from the centre to the circumference.

This root is extolled by the Braſilians and Portugueſe in a variety of diſeaſes, particularly in ſuppreſſions of urine and in nephritic and calculous complaints. Geoffroy is of opinion, that its virtue conſiſts in diſſolving and attenuating tenacious juices; and reports, that in ſundry diſorders ariſing from their viſcidity, it was

was found remarkably beneficial: that in nephritic pains and ſuppreſſions of urine, he has often given it with happy ſucceſs: that he has ſometimes ſeen the patient freed from pain almoſt in an inſtant, and a plentiful diſcharge of urine brought on: that in ulcers of the kidneys and bladder, where the urine was mucous and purulent, and could ſcarcely be voided, or not without great uneaſineſs, the ſymptoms were ſoon relieved by pareira, and the ulcer at length healed by joining to it balſam of copaiba: that in an aſthmatic caſe, where the patient was almoſt ſuffocated by thick phlegm, an infuſion of pareira, after many other medicines had been tried in vain, brought on a copious expectoration, which proved a ſolution of the diſeaſe: that a perſon who, from an acute pain under the liver, had become in a few hours icterical, had the pain relieved, after bleeding, by the third cup of the decoction, and all the ſymptoms removed by a continuance of it; and that the ſame diſorder frequently returning, ſhe always found relief from the ſame medicine: but that in another icterical caſe, where the liver was ſwelled, it did no good. He cautions againſt giving too large doſes, which might, he obſerves, raiſe a heat, and perhaps an inflammation in the kidneys: of the root in ſubſtance he preſcribes from twelve grains to half a dram, and in decoction or infuſion two or three drams; this quantity of the root, bruiſed, he directs to be boiled in a pint and a half of water till only a pint remains, which is to be ſtrained off, ſweetened with a little ſugar, divided into three portions, and drank as tea at intervals of half an hour.

The uſe of this root has not been in general accompanied with ſo much ſucceſs: but though, like

like many other medicines, it has not been found to anſwer the character at firſt given of it, and has thence fallen into neglect, we may preſume, from its ſenſible qualities, that it is not deſtitute of medical virtue. It has no remarkable ſmell; but to the taſte it manifeſts a notable ſweetneſs, of the liquorice kind, together with a conſiderable bitterneſs and a ſlight roughneſs covered by the ſweet matter. It gives out great part both of the bitter and the ſweet ſubſtance to watery and ſpirituous menſtrua: in evaporating the watery decoction, a conſiderable quantity of reſinous matter ſeparates, which does not mingle with the remaining extract or diſſolve in water, but is readily taken up by ſpirit; whence ſpirit appears to be the moſt perfect diſſolvent of its active parts. Both the ſpirituous tincture and extract are in taſte ſtronger than the watery.

PARIETARIA.

PARIETARIA Pharm. Lond. & Edinb. Parietaria officinarum & dioſcoridis C. B. Parietaria officinalis Linn. PELLITORY OF THE WALL: a plant with tender reddiſh ſtalks; rough, uncut, oblong leaves, pointed at both ends; and imperfect rough flowers, growing in cluſters along the ſtalks, followed each by a ſmall ſhining ſeed. It is perennial, common on old walls and among rubbiſh, and flowers in May.

THE leaves of pellitory of the wall have been uſed in cataplaſms for diſcuſſing inflammatory ſwellings: decoctions of them, and their expreſſed juice, have been given as emollient diuretics in nephritic caſes and iſchuries, and are ſaid,

ſaid, when long perſiſted in, to be uſeful aperients or ſweeteners in cutaneous defedations. The plant appears to be of no great activity, being rather oleraceous than medicinal: to the taſte, the leaves in ſubſtance and their juice, are little other than herbaceous and watery.

PASTINACA.

PASTINACA: an umbelliferous plant, with naked umbels, yellow flowers, and flat ſeeds ſurrounded with a leafy margin: the leaves are oblong, and ſtand in pairs on a middle rib, without pedicles.

1. PASTINACA: *Paſtinaca latifolia ſativa C. B. Paſtinaca ſativa Linn.* Garden parſnep: with pale-coloured ſmooth indented leaves, and a large fleſhy root.

2. ELAPHOBOSCUM: *Paſtinaca ſilveſtris latifolia C. B. Bancia & branca leonina quibuſdam.* Wild parſnep: with dark green rough indented leaves and ſlender woody roots; common about the ſides of fields; flowering, as the other, in June and July, and ripening its ſeeds in September. The garden ſort is ſuppoſed to be only a variety of this, and to owe its differences to culture.

THE roots of the garden parſnep, in taſte conſiderably ſweetiſh, are accounted a very nutritious aliment: they yield with rectified ſpirit a very ſweet extract, and in diſtillation with water a ſmall portion of eſſential oil poſſeſſing the ſpecific flavour of the roots. It is ſaid that by ſtanding in the ground for ſome years, it contracts

contracts pernicious qualities, ſo as to occaſion diſorders of the ſenſes(a).

The ſeeds of the garden ſort are ſomewhat aromatic; thoſe of the wild a little more ſo; of conſiderable ſmell, but no great pungency or warmth. By infuſion, they impregnate water moderately with their ſmell, but communicate very little taſte: in diſtillation they give over a ſmall quantity of a pale yellowiſh eſſential oil, in taſte moderately pungent, and ſmelling ſtrongly of the ſeeds: five pounds of the ſeeds of the garden parſnep yielded little more than a dram. Rectified ſpirit takes up by digeſtion the whole of their active matter, and carries off little in the inſpiſſation of the tincture: the extracts of both ſorts have a moderate warmth and bitteriſhneſs, differing in degree as the ſeeds themſelves. Theſe ſeeds have been commended as diuretics, ſimilar to thoſe of daucus, but weaker, which, in their ſenſible qualities, they apparently are: Haller reports, that thoſe of the wild ſpecies, made into pills, with extract of liquorice, were much uſed by Boerhaave againſt nephritic complaints and ulcerations of the bladder.

3. PANAX: *Panax heracleum Moriſon. Panax paſtinacæ folio C. B. Sphondylio vel potius paſtinacæ germanicæ affinis panax vel pſeudocoſtus flore luteo J. B. Laſerpitium Chironium Linn.* Hercules's allheal or wound wort: with uncut leaves, ſomewhat heart-ſhaped, but having one of the ſides lower than the other: the middle ribs, bearing the ſeveral ſets of leaves, ſtand in

(a) Ray, *Hiſtoria plantarum*, i. 420. Dan. Hoffman, *Acta acad. cæſar. nat. curioſor. vol.* vi. *anno* 1742. *obſ.* 128. *p.* 426.

pairs

pairs along a larger rib. It is a native of the warmer climates, and bears the colds of our own.

Both the ſeeds and the roots of this ſpecies are conſiderably warmer than thoſe of the two preceding. The roots and ſtalks have a ſtrong ſmell and taſte reſembling thoſe of opopanax; and Boerhaave relates, that on wounding the plant in ſummer, he obtained a yellow juice, which, being inſpiſſated a little in the ſun, agreed perfectly, in both reſpects, with that exotic gummy-reſin.

PENTAPHYLLUM.

PENTAPHYLLUM Pharm. Lond. Quinquefolium majus repens C. B. Potentilla reptans Linn. Cinquefoil or Five-leaved grass: a trailing plant, with oval ſerrated leaves, ſet five together on long pedicles, and pentapetalous yellow flowers ſtanding ſolitary on like pedicles: the cup is divided into ten unequal ſegments, the five innermoſt of which form a covering to a button of ſeeds: the root is long and ſlender, dark coloured on the outſide, and reddiſh within. It is perennial, grows wild on open clayie grounds, and flowers in June.

The roots of pentaphyllum are mild aſtringents, and give out their aſtringent matter both to water and ſpirit. They have been uſed in diarrhœas and other fluxes, in intermitting fevers, ſometimes as corroborants and antiſeptics in low colliquative acute fevers, in gargariſms for ſtrengthening the gums, &c. Their virtue is confined chiefly to the red cortical part, the whitiſh woody fibre in the middle being nearly inſipid.

PERSICA.

PERSICA molli carne vulgaris viridis & alba C. B. Amygdalus Perſica Linn. PEACH: a tree common in gardens; with oblong, narrow, pointed, ſerrated leaves; pale reddiſh flowers, compoſed of five broad petala with numerous ſtamina in the middle, ſet in five-leaved reddiſh cups, adhering to the branches without pedicles; and a fleſhy fruit covered with downy matter and including a furrowed ſtone.

THE flowers of the peach tree have an agreeable but weak ſmell, and a bitteriſh taſte: Boulduc obſerves, that when diſtilled without addition, by the heat of a water-bath, they yield one ſixth their weight or more of a whitiſh liquor, which communicates, to a conſiderable quantity of other liquids, a flavour like that of the kernels of fruits. Theſe flowers appear to be gently laxative: it is ſaid, that an infuſion in water of half an ounce of the freſh gathered flowers, or of a dram of them when dried, ſweetened with ſugar, proves, for children, an uſeful purgative and anthelmintic; and that the leaves, more unpalatable than the flowers, are ſomewhat more efficacious. The fruit is of the ſame quality with the other dulco-acid ſummer fruits: ſee *Fructus horæi.*

PERSICARIA.

ARSMART: an annual plant with oblong uncut leaves pointed at both ends, and imperfect flowers ſet in ſpikes on the tops of the ſtalks: the cup is thick and fleſhy, divided into five oval ſegments, which, cloſing, form a cover to an angular gloſſy ſeed.

1. PERSICARIA

1. PERSICARIA MITIS: *Perſicaria mitis maculoſa C. B. Pharm. Pariſ. Plumbago. Polygonum Perſicaria Linn.* Spotted arſmart; ſo called from moſt of the leaves having a blackiſh ſpot in the middle. It grows wild in moiſt watery places, and flowers in July.

THIS plant is ſaid to be a good vulnerary and antiſeptic; and decoctions of it in wine, to reſtrain the progreſs of gangrenes *(a)*. It has a ſlightly acerb taſte inclining to acidity, and no remarkable ſmell.

2. PERSICARIA URENS *ſive hydropiper C. B. Polygonum Hydropiper Linn.* Biting arſmart, lakeweed, water pepper: diſtinguiſhed from the former by the ſpikes of flowers being ſlenderer, the leaves ſhorter, narrower, and without any ſpots; but more remarkably by its taſte. In our markets, a plant of a different genus, the ſecond of the *ranunculi* hereafter deſcribed, is ſometimes ſold for it.

THE leaves of this ſpecies have an acrid burning taſte, and ſeem to be nearly of the ſame nature with thoſe of arum; their acrimony not riſing in diſtillation, and being deſtroyed in the proceſs *(b)*. They are commended as antiſeptic, aperient, diuretic; in ſcurvies and cachexies, humoural aſthmas, hypochondriacal and nephritic complaints, and in the wandering gout. The freſh leaves have been ſometimes

(a) Tournefort, *Memoires de l'acad. des ſcienc. de Pariſ. pour l'ann.* 1703.

(b) Rutty, *Synopſis of mineral waters, p.* 524. Dr. Cullen however ſays, "its acrimony operates chiefly on the "kidneys. What is remarkable, it gives out its diuretic "virtue in diſtillation to water." *Mat. Med.* 308.

applied externally, in ſtimulating cataplaſms, and for cleanſing foul ulcers and conſuming fungous fleſh; in which laſt intention they are ſaid to be uſed by the farriers.

PERUVIANUS CORTEX.

PERUVIANUS CORTEX Pharm. Lond. & Edinb. PERUVIAN BARK: the bark of a middling-ſized tree, growing in Peru, called by the Spaniards, from its efficacy againſt intermitting fevers, *palo de calenturas*, or the fever tree; by Linnæus, *Cinchona officinalis*. This virtue of the bark is ſaid to have been diſcovered by the Indians about the year 1500, but not revealed to their European maſters till 140 years after; when a ſignal cure having been performed by it on the Spaniſh viceroy's lady, the counteſs del Cinchon, it came into general uſe in thoſe parts, and was diſtinguiſhed by the appellations *pulvis comitiſſæ*, *cortex china china* or *chinchina*, *kina kina* or *kinkina*, and *quina quina* or *quinquina*. In 1649, a jeſuit brought a large quantity of it into Italy, which was diſtributed by the fathers of that order, at a great price, in different parts of Europe: about the ſame time a quantity was purchaſed by cardinal de Lugo for the uſe of the poor at Rome. From theſe it received the names of *cortex* or *pulvis jeſuiticus*, *pulvis patrum*, and *pulvis cardinalis de Lugo*.

This bark is brought to us in pieces of different ſizes, ſome rolled up into ſhort thick quills, and others flat: the outſide is browniſh, and generally covered in part with a whitiſh moſs: the inſide is of a yellowiſh, reddiſh, or ruſty iron colour. The beſt ſort breaks cloſe and ſmooth, and proves friable betwixt the teeth:

teeth: the inferiour kinds appear when broken of a woody texture, and in chewing ſeparate into fibres. The former pulveriſes more eaſily than the latter, and looks, when powdered, of a light browniſh colour, reſembling that of cinnamon, but ſomewhat paler.

A bark was ſome time ago brought from America under the name of the female Peruvian bark. This was found, from experience, to be leſs effectual as a medicine than the genuine ſort, which it was frequently ſubſtituted to or mixed with in France, inſomuch that its importation, as the editor of Geoffroy informs us, was prohibited by law. It is conſiderably thicker, whiter on the outſide, redder within, and weaker in ſmell and taſte than the true bark.

PERUVIAN BARK has a ſlight ſmell, approaching as it were to muſtineſs, yet ſo much of the aromatic kind as not to be diſagreeable. Its taſte is conſiderably bitter, aſtringent, very durable in the mouth, and accompanied with ſome degree of aromatic warmth, but not ſufficient to prevent its being ungrateful.

The febrifuge virtue, for which alone this medicine was at firſt recommended, has now been eſtabliſhed by the daily experience of about a century: and that, when judiciouſly and ſeaſonably adminiſtered, it proves as ſafe as it is effectual, is now alſo beyond diſpute. An emetic, which is in moſt caſes neceſſary, being taken towards the approach of a paroxyſm, that its operation may be over before the fit comes on; the bark is begun at the end of the paroxyſm, or even in the time of the hot fit, and repeated, in doſes of half a dram or more, every third or fourth hour, during the intermiſſion: after the fever has been removed, the medicine

is continued for a time, but more ſparingly, to prevent a return. During the uſe of the bark, the pulſe, which betwixt the paroxyſms is generally weak and ſlow, becomes ſtronger and quicker, the appetite mends, the patient grows more cheerful, and perſpiration increaſes: theſe may be looked upon as ſure preſages of its ſucceſs. At firſt it frequently occaſions a looſeneſs, and this alſo is ſalutary; but if the purging runs on too long, as the fever rarely yields while this evacuation continues, it is uſually checked by the addition of a little opium: if too great coſtiveneſs enſues, recourſe is had to glyſters. In groſs impure habits, gentle purgatives are premiſed to the bark, or given for a time in conjunction with it: in agues of the inflammatory kind, or accompanied with great heat, a little nitre is joined or interpoſed: in lax ſpongy conſtitutions, and a thin watery ſtate of the blood, the bark is aſſiſted by bitters, ſnakeroot, camphor, and chalybeates: where obſtructions of the abdominal viſcera are apprehended, it is not ventured on without the addition of fixt alkaline ſalts, ſal ammoniac, or other aperients. In all caſes, moderate exerciſe, and the drinking of warm liquids, promote its effects. As the bark is hurtful in the inflammatory diatheſis, it is not near ſo effectual in vernal, as in ſummer and autumnal intermittents *(a)*.

In remitting fevers, this medicine is leſs ſucceſsful than in thoſe which have perfect intermiſſions: in hectics, or wherever pus is formed, or juices are extravaſated, it does harm. In the decline of long nervous fevers or after a remiſſion, and in thoſe of the low malignant kind where the blood is colliquated and the ſtrength

* *(a) Cull. Mat. Med.* 292.

exhauſted,

exhauſted, it proves an excellent cordial, corroborant, and antiſeptic.

Peruvian bark has likewiſe been found ſerviceable in gangrenes and mortifications, and in foul obſtinate ulcers and running ſores of other kinds: in theſe caſes, taken in large and repeated doſes, it frequently brings on a laudable ſuppuration, which degenerates on diſcontinuing the uſe of the medicine, and again turns kindly upon reſuming it. The like effects have been obſerved from it in variolous caſes, where either the puſtules did not duly ſuppurate, or petechiæ ſhewed a diſpoſition to a gangrene: by the uſe of bark, the empty veſicles filled with matter, watery ſanies changed into thick white pus, and the petechiæ became gradually paler and at length diſappeared. The principal ſymptom in this diſeaſe that contraindicates this valuable ſuppurant and antiſeptic, is great obſtruction at the breaſt or difficulty of breathing; which are always by this medicine increaſed, inſomuch that ſmall doſes have in ſome caſes endangered ſuffocation.

In tumours of the glands, the Peruvian bark appears to promote, not ſuppuration, but reſolution. In the Medical Obſervations and Inquiries publiſhed by a ſociety of phyſicians in London, there are ſeveral inſtances of its being given with ſucceſs in ſcrophulous complaints. Dr. Fothergill obſerves, that inveterate ophthalmiæ generally yield to it: that beginning glandular tumours are very frequently reſolved and their farther progreſs ſtopt by it: that ſwelled lips, cutaneous blotches ariſing from a like cauſe, are healed, and the tendency to a ſtrumous habit corrected: that it does not ſucceed in all caſes, but that there are few in which a trial can be attended with much detriment: that

he has never known it to avail where the bones were affected, or where the ſcrophulous tumour was ſo ſituated as to be attended with much pain, as in the joints or under the membranous covers of the muſcles; for when it attacks theſe parts, the perioſteum, and conſequently the bone, ſeldom eſcape being injured; that here the bark, inſtead of leſſening, adds to the fever which accompanies theſe circumſtances, and if it does not increaſe the force of the miſchief, ſeems at leaſt to haſten its progreſs.

Peruvian bark has been applied likewiſe, in conjunction with other appropriated medicines, and often with good ſucceſs, to the cure of periodic head-achs, hyſterical, hypochondriacal, vertiginous and epileptic complaints, and other diſorders that have regular intermiſſions. By its bitterneſs, aſtringency, and mild aromatic warmth, it ſtrengthens the whole ſyſtem, and proves a medicine of great utility in weakneſs of the ſtomach, uterine fluxes, and ſundry chronical diſeaſes proceeding from a laxity and debility of the fibres. To ſtrengthen the ſolids appears indeed, in all caſes, to be its primary operation; and its ſalutary virtues in different diſeaſes, to be no other than conſequential effects of this general power. In all the diſtempers where bark is known to take place, other aſtringent and bitter medicines, ſingly or combined, have likewiſe been of ſervice, though not equally with this natural combination of them*(a).

The virtues of this bark are very difficultly extracted by long coction in water, and part of

*(a) Dr. Percival found, that on mixing infuſion of bark with putrid or ox gall, an inſtant coagulation enſued, and the fœtor was increaſed. Hence he accounts for the diſagreement of this medicine in the bilious fevers of the Weſt Indies, *Eſſ. Med. and Exper.* vol. ii. *p.* 24.

what

what the liquor is by heat enabled to take up begins to ſeparate as ſoon as it is cold. This reſinous part, which is rather melted out by the boiling heat than diſſolved by the water as a menſtruum, ſeems to contain chiefly the aſtringency of the drug: the bitter matter appears to be perfectly diſſoluble, though more difficult to be got completely out. *After repeated infuſion in cold water, till the liquor came off colourleſs and ſuffered no change from ſolution of vitriol, warm water extracted a conſiderable colour, and vitriol produced with this infuſion an opake black: after warm water would extract no more, very hot water received a deeper colour than that of the ſtrongeſt cold infuſion of freſh bark; and this likewiſe ſtruck a deep black with vitriol: boiling water had the ſame effect, after very hot water had ceaſed to act *(a)*.

On boiling a pound of finely powdered bark for an hour or two in five or ſix quarts of water, the decoction whilſt hot looks clear and reddiſh, but in cooling becomes turbid and of a pale yellowiſh or wheyiſh hue: in this ſtate it is found to partake, in a great degree, both of the bitterneſs and aſtringency of the bark, but in proportion as it depoſites the matter that made it turbid, it loſes more and more of its ſtypticity, the bitterneſs ſeeming to continue undiminiſhed. The remaining bark, boiled in freſh water, exhibits the ſame appearance for two or three times ſucceſſively; and when, at length, it ceaſes to render the water turbid, it imparts a bitterneſs without aſtringency *(b)*, retaining ſtill ſome ſhare

(a) M. S. of Dr. Lewis.

(b) In the above experiments, I judged of the aſtringency only from the taſte: ſolution of chalybeate vitriol, ſo uſeful on other occaſions for diſcovering aſtringent matter

ſhare of bitterneſs itſelf. The vapour which exhales in the firſt coction being caught in proper veſſels, condenſes into a limpid liquor which ſmells ſtrongly of the bark; though no ſeparable oil is obtained on ſubmitting many pounds to the operation. The ſeveral decoctions, ſtrained and inſpiſſated together, yield an extract, rather leſs bitter, and much leſs ſtyptic, than the bark in ſubſtance: this extract is kept in the ſhops in a ſoft and a hard form; the one of a proper conſiſtence for making into pills; the other fit for being reduced into powder.

Extr. cort. peruv. molle & durum *Ph. Lond.*

As

in vegetable decoctions or infuſions, ſeemed here to fail; for having often mixed it, in different quantities, with even the firſt decoctions of bark, it produced, not a black, but a deep green. I have ſince obſerved, that when the vitriolic ſolution is uſed in very ſmall proportion, it ſtrikes a black with the turbid decoctions of bark, as with other aſtringents; and that even the green mixtures, reſulting from a greater addition of the vitriol, on being largely diluted with water, become black or bluiſh like diluted ink. The reſinous matter, which ſubſides on ſtanding from the turbid decoctions, being diſſolved in ſpirit of wine, gave likewiſe a black with vitriol. But when the bark had been boiled in freſh waters, till it no longer gave any turbidneſs to the liquor, the laſt tranſparent decoctions, though ſtill pretty ſtrong in taſte, gave no blackneſs at all.

Some doubts having ariſen with regard to this experiment, I have repeated it twice, and found the event both times the ſame as before. The laſt decoctions, on dropping in the chalybeate ſolution, contracted indeed a ſlight duſky hue, which in certain poſitions might be miſtaken for a low degree of blackneſs; but the mixtures, held between the eye and the light, appeared only of a kind of olive yellowiſh or browniſh colour, and, on ſtanding for a little while, depoſited, not a black, but an ochery precipitate; whereas the firſt infuſions or decoctions, though ſo far diluted with water as ſcarcely to diſcover any taſte, ſtruck a bluiſh colour like that of diluted ink, and what little precipitate could be ſeparated was black.

After the boiling of the bark in water had been repeated till the filtered liquor no longer made any change with ſolution

As this drug gives out its virtue ſo difficultly and imperfectly to boiling water, it has not been ſuſpected that cold water would have any conſiderable action on it: I have nevertheleſs found, that an infuſion in cold water, though perfectly tranſparent, is rather ſtronger in taſte than even the turbid decoction, though the latter has ſomewhat more of a kind of fulneſs in the mouth *(a)*. It is by means of a gummy matter

tion of vitriol, the remaining bark gave no tincture at all to rectified ſpirit.

But freſh bark, boiled in ſucceſſive portions of rectified ſpirit, till it ceaſed to impart any colour to the menſtruum, gave ſtill a deep tincture to boiling water; and this decoction, on the addition of ſolution of vitriol, exhibited nearly the ſame appearances as the laſt decoctions above-mentioned, only in a higher degree, the precipitate being much more copious, and its colour deeper.

Though by repeated boilings in water the bark may be ſo exhauſted as to give out nothing to ſpirit, but after the repeated action of ſpirit ſtill gives out ſomething to water; yet ſpirit appears, to be the moſt active menſtruum of its medicinal parts. For all, that ſpirit can diſſolve, is extracted by a far leſs quantity of ſpirit than of water; and what ſpirit leaves undiſſolved is of little taſte. Equal quantities of bark being digeſted for the ſame length of time with equal quantities of water and rectified ſpirit, with or without heat; the ſpirituous tinctures proved always ſtronger in taſte than the watery, and left on evaporation a larger proportion of extract *||.

*|| This aſſertion ſeems contrary to the reſult of ſome experiments by Dr. Percival, related in his firſt vol. of *Eſſ. Med. and Exper.* p. 91, in which a dram of bark infuſed ſeven days in three ounces each of rectified ſpirit, proof ſpirit, and water, loſt in the firſt. ſix grains; in the ſecond, eight and a quarter; and in the third, eight. Theſe accounts can be reconciled only upon the ſuppoſition that watery liquors do, indeed, extract more of the inert gummy matter of bark; but ſpirituous, more of the active matter.

(a) I have endeavoured to compare the ſtrength of the two preparations by characters that may be thought more ſatisfactory than the taſte. A cold infuſion and decoction were made with equal quantities of bark and water, and both

matter in vegetables, that the reſinous parts become diſſoluble in watery liquors; and it ſeems probable that, in boiling, part of the gummy principle of the bark is haſtily diſſolved and diſunited from the reſinous, whereas cold water, acting more gradually, extracts them both together. I have given the infuſions in intermitting fevers as well as other diſorders, with all the ſucceſs that could have been expected from any preparation of this valuable medicine: the proportions commonly followed were, one ounce of the bark in fine powder, and eight or twelve of water, which were macerated without heat for twenty-four hours *(a)*, and

both liquors paſſed through a filter: the infuſion ran through faſt; the decoction exceeding ſlowly, and continued turbid and opake after filtration. The two liquors, examined hydroſtatically, were found very nearly of the ſame ſpecific gravity. Equal quantities of them being turned black with equal quantities of ſolution of vitriol, the quantity of water neceſſary for diluting the blackneſs of the mixtures to an imperceptible degree, was very nearly the ſame for both. Theſe experiments were often repeated, and ſeemed to prove, that the infuſion and decoction are not conſiderably different in the quantity of matter taken up from the bark, but that this matter is in the cold infuſion tranſparently diſſolved, whereas in the decoction great part of it is only diffuſed through the liquor in an undiſſolved ſtate.—In the infuſion itſelf, however, the ſolution does not appear to be very intimate. The tranſparent liquor becomes in a day or two turbid, and on ſtanding for ſome weeks (being now and then ſhaken to prevent its growing mouldy) depoſites ſo much of the reſinous part, that it is in taſte ſimply bitter, and produces no blackneſs with vitriol. The reſinous ſediment gives to ſpirit of wine a dark-coloured aſtringent tincture, which ſtrikes a black with vitriol like the tincture of bark itſelf.

(a) Since the above account was written, this preparation has been received in general practice, and found to anſwer the character here given of it. The time of maceration has been diminiſhed to twelve hours, and ſome late experiments

and the clear liquor given in doſes of two or three ounces.

* The London college ſeems now convinced that long coction of the bark is either unneceſſary, or hurtful by diſſipating ſome of the more volatile parts, and precipitating the reſinous ones; for they have given a formula for a decoction of bark, in which one ounce of the powder is boiled in a pint and three ounces of water for ten minutes only, in a cloſe veſſel, and then ſtrained off while hot. Decoct. cort. peruv. *Ph. Lond.*

It is a common opinion, that bark in ſubſtance is more effectual than any preparation of it. Thus much is plain, that the infuſions, as well as the decoctions, have not near ſo much effect as the quantity of bark they were made from, as the menſtruum does not in either caſe completely extract its active matter: but their effects are evidently the ſame in kind, and the difference in degree may be compenſated by an increaſe in the quantity.

The turbid decoctions, on the addition of any of the concentrated mineral acids, in the proportion of one drop to about a quarter of an ounce, become tranſparent, of a bright pale yellow colour, and of a rougher or more acerb

experiments ſhew, that it may be ſtill further reduced, without any injury to the medicine. A mixture of one part of bark and eight of water being filtered after ſtanding for one hour, the liquor appeared, from its taſte, from its colour, from its ſpecific gravity, and from the trial with ſolution of vitriol, to be very nearly, if not fully, as ſtrong, as thoſe which had ſtood 2, 4, 6, 8, 12, 24 hours. On doubling the quantity of bark, and ſhaking it with the water for only two or three minutes, the liquor proved rather ſtronger than any of the preceding; and being afterwards kept 24 hours on the ſame bark, it gained no ſenſible addition to its ſtrength. So that a very ſtrong infuſion may be obtained in a very expeditious manner.

taſte,

taſte, but with the loſs of their bitterneſs: the vegetable acids, added in proportionably larger quantity, render them likewiſe tranſparent and improve their roughneſs, without much diminiſhing their bitterneſs: all theſe mixtures depoſite, on ſtanding, a little powdery ſediment. Alkalies, both fixt and volatile, occaſion a more copious precipitation, and inſtead of making the turbid decoctions clear, make the clear turbid.

Rectified ſpirit of wine receives from bark a deep reddiſh brown colour, and takes up much more of its active matter than watery liquors *(a): by digeſting the powder firſt in ſome rectified ſpirit, and then boiling it in water, nearly the whole of its virtue is pretty readily got out. On inſpiſſating the filtered tincture, the ſpirit carries off nothing remarkable of its ſmell or taſte: the remaining extract retains the peculiar flavour of the bark, as well as its aſtringency and bitterneſs, and proves a very elegant preparation, preferable to the pure reſin obtained by precipitation from the tincture by water, as containing a part of the gummy matter, which is a medicinal principle of the bark as well as the reſin. The ſpirituous tincture, and the decoction of the reſiduum, may be united into an extract, poſſeſſing this advantage in a greater degree, by inſpiſſating them ſeparately to the conſiſtence of a ſyrup, then mixing them together, and continuing the evaporation with a gentle heat.

Extr. cort. peruv. *Ph. Ed.* Extr. cort. peruv. cum reſina, *Ph. Lond.*

Proof ſpirit extracts leſs from bark than rectified ſpirit, but more than water. Four ounces of the powder, macerated for ſome days

* *(a)* See Dr. Percival's different opinion, at the note in page 201.

without

without heat, in a quart † or two pounds and a half ‡ of proof ſpirit, impart a conſiderable degree both of bitterneſs and aſtringency: on applying heat †, the taſte becomes ſtronger, the colour darker, and the liquor ſomewhat turbid; from whence it may be concluded, that the reſinous part is not by this menſtruum completely diſſolved.

† Tinct. cort. peruv. *Ph. Lond.*
‡ *Ph. Ed.*

Spirit of ſal ammoniac made with fixt alkaline ſalt, by maceration with powdered bark in the above proportion, receives from it very little taſte or colour. The ſpirit prepared with quicklime, and the dulcified ſpirit, extract in a few hours a very deep colour, and become ſtrongly impregnated with its virtue. Though the ſpirit made with quicklime is held too acrimonious to be given internally by itſelf, it is not liable to that objection here; its pungency being ſheathed by the ſubſtance which it diſſolves.

Among the ſeveral ſubſtances which I have tried for covering the taſte of bark, to ſome perſons offenſive, liquorice ſeemed to anſwer the beſt. Aromatics alone leave the taſte of the bark very ſenſible in the mouth; but liquorice appeared to cover it effectually, whether in draughts or electuaries, with the bark in ſubſtance or its preparations: to this compound any proper aromatic material may be ſuperadded, to give a grateful flavour. For liquid forms, an infuſion of the liquorice, and for electuaries the extract ſhould be uſed: for making up the electuaries, mucilages are more proper than ſyrups, as the former occaſion the compound to paſs down freely without ſticking about the mouth and fauces.

* PERUVIANUS CORTEX RUBER: Red Peruvian bark. In the year 1779, a Spaniſh ſhip from Lima

Lima was taken by an Engliſh frigate, and carried into Liſbon. Her cargo chiefly conſiſted of bark, part of which was afterwards brought to London, and purchaſed by ſeveral druggiſts. From its large coarſe appearance, it was ſometime before practitioners could be prevailed on to uſe it. At length, it was tried in ſome of the hoſpitals, and found to be ſo efficacious, that an opinion ſoon prevailed of its being of a much ſuperiour quality to the beſt common bark. Trials were multiplied throughout the kingdom, in a year when intermittents were remarkably frequent and obſtinate; and its reputation increaſed with every experiment. Chemical teſts were equally favourable to it, as they proved it to contain a much greater proportion of active matter, than the other ſorts. At length, Dr. Saunders, a phyſician in London, eminent for chemical knowledge, publiſhed a treatiſe, in which various experiments on this bark were related, and atteſtations of its great medical efficacy from ſeveral practitioners were annexed. From this pamphlet, together with the editor's own experiments, the following account is extracted.

The *red bark*, as it is called, is in much larger and thicker pieces than the common. Moſt of the pieces are concave, though not rolled together, like the quilled bark. They break ſhort, like the beſt common bark; and appear evidently compoſed of three layers. The outer is thin, rugged, frequently covered with a moſſy ſubſtance, and of a reddiſh brown colour. The middle is thicker, more compact, and of a darker colour: it is very brittle and reſinous. The innermoſt layer is more woody and fibrous, and of a brighter red. In powdering this bark, the middle layer, which ſeems to contain the greateſt proportion of reſinous matter,

ter, does not break ſo readily as the reſt; a circumſtance to be attended to, leſt the moſt active part ſhould be left out of the fine powder.

This red bark to the taſte diſcovers all the peculiar flavour of the Peruvian bark, but much ſtronger than the common officinal ſort. An infuſion in cold water is intenſely bitter; more ſo than the ſtrongeſt decoction of common bark. Its aſtringency is in an equal degree greater than that of the infuſion of common bark, as is ſhewn by the addition of martial vitriol. The ſpirituous tincture of the red bark is alſo proportionally ſtronger than that of the pale. The quantity of matter extracted by rectified ſpirit from the powder of the former, was to that from the latter, as 3 to 2 in one experiment, and as 229 to 130 in another. And yet, on infuſing the two reſiduums of the firſt experiment in boiling water, that of the red bark gave a liquor conſiderably bitter, and which ſtruck a black with martial vitriol; while that yielded by the other was nearly taſteleſs, and void of aſtringency.

With reſpect to medical properties, from numerous and repeated trials it appears, that the red bark poſſeſſes the ſame virtues with the common, but in a much higher degree. A ſingle half ounce of this has radically cured an obſtinate intermittent, where many ounces of the other kind had either had no effect, or merely a temporary one.

Upon the whole, there is the ſtrongeſt reaſon to conclude, with Dr. Saunders, that the *red bark* is the true Peruvian bark, of the beſt quality, or in its higheſt perfection. It was probably the kind of bark firſt introduced into Europe, and which acquired ſo much reputation in the hands of Sydenham and Morton.

It

It is the ſort ſtill preferred by the Spaniards for their own uſe; and they are ſurprized at our preference of an inferiour kind. Whether it be, as Dr. Saunders firſt imagined, the bark of the *trunk* of *full grown* trees, the *branches* or *young* trees of which yield the pale bark; or whether the trees be different *ſpecies*, or, at leaſt, *varieties*, does not ſeem accurately determined. The latter opinion is, perhaps, rendered the moſt probable, by an obſervation in the third edition of Dr. Saunder's pamphlet. He ſays, that "he has lately ſeen ſome exceeding good red bark imported by a Spaniſh merchant, a conſiderable part of which was as ſmall as the quilled bark in common uſe, yet ſtill preſerved its redneſs in that form, approaching, however, to the colour of cinnamon. It was extremely reſinous, and gave evident proofs of its being the *quill* of the larger red bark which was in the ſame cheſt." This idea ſeems to be confirmed by ſome curious remarks on the natural hiſtory of the cinchona, communicated by Dr. Simmons from the papers of the late M. Juſſieu, and ſubjoined to the ſame edition.

This writer makes ſeveral different ſpecies of bark, which may, however, be reduced to two. The firſt includes the *red*, the *yellow*, and the *knotty* barks, all of which have very ſmooth leaves, purpliſh flowers, with a bark that is bitter to the taſte, and more or leſs coloured. Of theſe, the *red* is held in the higheſt eſtimation, and was that firſt imported into Europe, but is now become exceeding ſcarce, ſo that its place has been ſupplied by the yellow and knotty kinds. The ſecond ſpecies includes the *white* barks, of which there are four varieties. All theſe have broad hairy leaves, and red,

very

very odoriferous flowers, furnished with hairs on their inside. In two of these varieties the inner layers of bark are of a reddish hue. These have a slightly bitter taste, and somewhat of a febrifuge quality, which, however, they soon lose. The bark of the other two is quite white and insipid.

There have been lately discovered in the province of Santa-Fe, four degrees and a half *north* of the equator, two kinds of cinchona, one of which appears to be the same with the *red* bark of Peru; the other, one of the *white* species. This is a fortunate discovery, as it points out a new store of this most valuable medicine, when the ancient ones shall be exhausted. We shall see in the next article, that our own settlements are not unprovided with a plant of the same genus, and similar virtues.

* CINCHONA CARRIBÆA *Linn. Cinchona Jamaicensis Dris. Wright, Phil. Transf.* vol. lxxvii. part ii. This is a species of the Jesuit's bark, produced in Jamaica and the Carribee islands, of which an accurate description, with an account of its virtues, has been published by Dr. Wright in the volume of Philosophical Transactions above referred to; and some additions are made to this, in a letter from the same physician to Dr. Duncan. *Med. Comment.* vol. v. p. 398.

This tree, called in Jamaica the *sea-side beech*, grows to the height of from twenty to forty or fifty feet. The outer bark of the large trees is white, furrowed, and very thick. This is inert, and may be knocked off from the inner. This latter is of a dark brown colour. Its flavour is at first sweet, with a mixture of the taste of horseradish and of the eastern aromatics; but

when ſwallowed, it has that very bitterneſs and aſtringency which characterize the Peruvian bark. It yields its virtues both to cold and warm water; and a decoction of half an ounce of it boiled in a quart of water to the conſumption of a pint, proved as ſtrong as a decoction of an ounce and a half of the true bark. With the addition of orange peel it makes an elegant and grateful bitter tincture.

Its medicinal powers have been frequently tried by Dr. Wright, and it was found very efficacious in the dangerous remittent fevers of the Weſt Indies, and alſo in nervous fevers. It has been adminiſtered in London in an intermittent, and effected a cure as completely as the Peruvian bark. From theſe accounts, we may hope that it will prove an uſeful and efficacious ſubſtitute for the cinchona of Peru, if ever the ſupplies of this medicine ſhould fail.

PETASITES.

PETASITES major & vulgaris C. B. Galerita & tuſſilago major quibuſdam. Tuſſilago Petaſites Linn. BUTTERBUR or PESTILENTWORT: a perennial plant, found wild by the ſides of ditches and in meadows; producing early in the ſpring a thick naked roundiſh ſtalk, with a ſpike of ſmall naked purpliſh floſculous flowers on the top: the flowers and ſtalks ſoon wither, and are ſucceeded about May, by very large, roundiſh or ſomewhat heart-ſhaped leaves, ſtanding on long pedicles, ſomewhat hollowed in the middle ſo as to reſemble a bonnet *(petaſos)*: the root is long, thick, of a dark browniſh or black colour on the outſide, and white within.

THE

THE roots of butterbur are recommended as aperient and alexipharmac; and promiſe, though now diſregarded in practice, to be of conſiderable activity. They have a ſtrong ſmell, and a bitteriſh acrid taſte, of the aromatic kind, but not agreeable, very durable and diffuſive, ſcarcely to be concealed, as Fuller obſerves, by a large admixture of other ſubſtances. Their virtue appears to reſide in a reſinous matter; which is diſtinguiſhable by the eye in the dried root, and which is readily extracted by ſpirit of wine.

PETROLEUM.

PETROLEUM, Pharm. Lond. Oleum petræ, Oleum terræ. ROCK OIL: a fluid bitumen or mineral oil; exuding from the clefts of rocks or from the earth, or found floating on the ſurface of waters, in different parts of Europe, and more plentifully in the warmer countries; ſimilar, in its general properties, to the oils extracted by diſtillation from pitcoal, amber, and other ſolid bituminous bodies. The more fluid petrolea have been diſtinguiſhed by the name of *naphtha*; and the thicker by thoſe of *piſſaſphaltum* and *piſſelæum*.

1. PETROLEUM ALBUM. White petroleum: nearly colourleſs; almoſt as clear, fluid, and tranſparent, as water; of a ſtrong penetrating ſmell, not diſagreeable, ſomewhat reſembling that of rectified oil of amber. The principal, or only, part of Europe, in which it is found, is the dutchy of Modena in Italy.

2. PETROLEUM FLAVUM *ſeu italicum Pharm. Pariſ.* Yellow petroleum: of a clear yellow

colour; ſomewhat leſs fluid than the former; in ſmell rather leſs penetrating, leſs agreeable, and more nearly allied to that of oil of amber. This alſo is found chiefly in the dutchy of Modena, and does not appear to differ very materially from the white ſort.

3. PETROLEUM RUBRUM *ſeu gabianum, ſive Oleum gabianum Pharm. Pariſ.* Red petroleum: of a blackiſh red colour; of a thicker conſiſtence, and a leſs penetrating and more diſagreeable ſmell, than either of the foregoing; found in Italy, and about the village Gabian in Languedoc.

There are many variations of theſe oils in regard to colour, fluidity, ſubtility, and the pungency of their ſmell and taſte: the moſt fluid are in general the moſt ſubtile and pungent. Among us, the finer kinds are rarely to be met with; and even the inferiour ſorts are rarely unſophiſticated.

Fine petroleum catches fire on the approach of a flaming body, even without the contact of its ſubſtance with the flame; and burns entirely away. The haſty affuſion of concentrated mineral acids, which raiſes a violent ebullition with diſtilled vegetable oils, and generally ſets them on fire, makes no great conflict with petroleum: its conſiſtence becomes thicker by this admixture, and its ſmell more fragrant. By diſtillation, it loſes much of its natural ſcent, and becomes ſomewhat more pellucid than at firſt; a ſmall quantity of a browniſh or yellowiſh matter, ſimilar to amber *(a)*, remaining behind. Dropt on water, it ſpreads to a

(a) Borrichius, *Acta medica & philoſoph. Hafnienſia, tom.* i. *obſ.* 57.

great

great diſtance, forming a various-coloured film on the ſurface. It floats alſo on rectified ſpirit of wine, and appears to be indiſſoluble in this menſtruum; but unites with the eſſential oils of vegetables *(a)*.

The finer petrolea, more agreeable than oil of amber, and more mild than that of turpentine, partake of the virtues of both. They have been ſometimes taken internally in nervous complaints and as a diuretic; but uſed chiefly as an external ſtimulant, againſt rheumatic pains, palſies, chilblains, &c. In theſe intentions, ſome mineral oils, procurable among ourſelves, are uſed by the common people, and often with benefit: the empyrical medicine, called Britiſh oil, is of the ſame nature with the petrolea; the genuine ſort being extracted by diſtillation from a hard bitumen, or a kind of ſtone-coal, found in Shropſhire and other parts of England.

4. PETROLEUM BARBADENSE *Pharm. Edinb. Bitumen barbadenſe. Piſſelæum indicum.* Barbadoes tar: of a reddiſh black colour, and a thick conſiſtence, approaching to that of treacle or common tar. It is found in ſeveral of our American iſlands, particularly, as is ſaid, in that from which it receives its name.

This bitumen, greatly eſteemed by the Americans as a ſudorific, in diſorders of the breaſt, and as an external diſcutient and antiparalytic, is in ſmell more diſagreeable, and both in ſmell and taſte leſs pungent, than the foregoing petrolea. It is likewiſe leſs inflammable, and leaves on being burnt a conſiderable quantity of

(a) See *l'Hiſtoire & les memoires de l'acad. roy. des ſcienc. de Paris, pour les années* 1715 & 1726.

Ol. petrolei *Ph. Lond.*

aſhes. In diſtillation, it yields an oil different, in regard to its colour, from thoſe afforded by ſuch of the other bitumens as have been examined; appearing, when placed betwixt the eye and the light, of an orange colour, in other poſitions blue; but loſing this variability of aſpect in long keeping, and then looking in all ſituations yellow. This oil, and a balſam prepared by boiling the petroleum itſelf with one fourth its weight of flowers of ſulphur, are directed by the London college to be kept in the ſhops.

Petroleum ſulphurat. *Ph. Lond.*

PETROSELINUM.

PETROSELINUM Pharm. Lond. & Edinb. Apium hortenſe ſeu petroſelinum vulgo C. B. Apium Petroſelinum Linn. PARSLEY: an umbelliferous plant, with deep green winged leaves, of which thoſe that grow on the ſtalk are divided into fine oblong narrow ſegments: the ſeeds are ſmall; ſomewhat crookedly plano-convex, of a duſky greeniſh colour, with four yellow ridges along the convex ſide; the root long, whitiſh, about the thickneſs of the finger. It is biennial, a native of moiſt grounds in the ſouthern parts of Europe, and common in our culinary grounds.

THE roots of parſley are ſometimes uſed in apozems, and ſuppoſed to be aperient and diuretic, but liable to produce flatulencies. Their taſte is ſweetiſh, accompanied with a ſlight warmth or flavour, ſomewhat reſembling that of a carrot. Rectified ſpirit takes up, by digeſtion, all their active matter, and on inſpiſſating the tincture, leaves it entire in the extract; in which, the ſweetneſs is very conſiderable, the

the warmth very weak. Diſtilled with water, they impregnate the firſt runnings pretty ſtrongly with their flavour: when large quantities are diſtilled, there ſeparates a ſmall portion, two or three drams from two hundred pounds, of eſſential oil, which partly ſwims on the water, partly ſinks, and partly concretes about the noſe of the worm into a butyraceous matter.

The leaves of the plant have a greater warmth and leſs ſweetneſs than the roots. In diſtillation with water, they yield a greater quantity of eſſential oil, about ten drams from two hundred pounds, ſmelling agreeably of the herb, and in taſte moderately pungent.

The ſeeds, ſaid to be carminative, reſolvent, and diuretic, and commended in the German ephemerides for deſtroying cutaneous inſects in children, are in taſte warmer and more aromatic than any other part of the plant, and accompanied with a conſiderable bitterneſs. In diſtillation, three pounds yielded above an ounce of eſſential oil, great part of which ſunk in the watery fluid. They give out little by infuſion to watery menſtrua, but readily impart all their virtue to rectified ſpirit: the tincture loſes nothing conſiderable in being gently inſpiſſated to the conſiſtence of an extract, which proves a moderately warm, pungent, bitteriſh, not very grateful, aromatic.

PETROSELINUM MACEDONICUM.

APIUM MACEDONICUM C. B. Apium petræum & petrapium quibuſdam. Bubon macedonicum Linn. MACEDONIAN PARSLEY: differing from the foregoing, in the upper and lower leaves being alike, the ſtalks hairy and much branched, the ſeeds dark coloured and covered

with rough hoarineſs. It is a native of ſtony ſoils in Macedonia, and cultivated in ſome of our gardens.

THE Macedonian parſley is ſimilar in quality to the common ſort, but weaker and leſs grateful. The ſeeds are the only part made uſe of, and theſe only as ingredients in the mithridate and theriaca: hence the Edinburgh college, having now dropt thoſe compoſitions, has dropt alſo the Macedonian parſley.

PEUCEDANUM.

PEUCEDANUM germanicum C. B. Pinaſtellum, fæniculum porcinum, fæniculum ſilveſtre, marathrum ſilveſtre, marathrophyllum, & cauda porcina quibuſdam. Peucedanum officinale Linn. HOGS FENNEL, HORESTRONG, SULPHURWORT: an umbelliferous plant, with large leaves divided and ſubdivided tripartitely into fine oblong narrow ſegments: the ſeed is ſomewhat oval, flattiſh, marked with three ſtriæ, and ſurrounded with a leafy margin: the root long and thick, with a tuft of filaments on the top, blackiſh on the outſide and pale coloured within. It is perennial, grows wild by the ſea ſhores and in moiſt ſhady grounds, and flowers in July.

THE roots of ſulphurwort have a ſtrong fetid ſmell, ſomewhat reſembling that of ſulphureous ſolutions; and an unctuous, ſubacrid, bitteriſh taſte. Wounded when freſh, in the ſpring or autumn, particularly in the former ſeaſon, in which they are moſt vigorous, they yield a conſiderable quantity of yellow juice, which ſoon dries into a ſolid gummy-reſin, retaining the taſte and the ſtrong ſmell of the root. This gummy

gummy-reſin ſtands recommended as an aperient, and antihyſteric.

PILOSELLA.

PILOSELLA, Myoſotis, ſeu Auricula muris. Pharm. Pariſ. Piloſella major repens hirſuta C. B. Hieracium Piloſella Linn. MOUSE-EAR: a low creeping hairy plant; with oval leaves, in ſhape like thoſe of the daiſy, joined to the ſtalks without pedicles, green above and white underneath: the flowers, which ſtand ſolitary on upright naked ſtalks, are compoſed of a number of yellow floſcules, ſet in ſcaly cups, and followed by ſmall black ſeeds, winged with down. It is perennial, grows wild in dry paſture grounds, and flowers in June and July.

PILOSELLA is one of the bitteriſh lacteſcent plants. Its leaves differ from thoſe of dandelion, cichory, and the other herbs of that claſs, in being much leſs juicy, leſs bitter, accompanied with ſome aſtringency which ſeems to prevail above the bitter, and a ſlight ſweetiſhneſs very durable in the mouth: in the extracts made from them, both by water and ſpirit, the aſtringency is more manifeſtly the prevailing principle, though even when thus concentrated it is not very ſtrong. The roots are conſiderably bitterer than the leaves, and leſs, if at all, aſtringent.

PIMPINELLA.

PIMPINELLA SAXIFRAGA Linn. BURNET-SAXIFRAGE; a perennial umbelliferous plant; with naked umbels; the outermoſt flowers compoſed of unequal petals, the inner equal; the

ſeeds

ſeeds ſmall, oblong, ſomewhat pointed, flat on one ſide, convex and ſtriated on the other; the lower leaves roundiſh, indented, ſet in pairs along a middle rib with an odd one at the end; the upper leaves oblong and very narrow; the roots long, ſlender, and whitiſh.

1. PIMPINELLA ALBA *Germanorum: Pimpinella ſaxifraga major umbella candida C. B.* Greater or white burnet-ſaxifrage: with ſome of the leaves pretty deeply cut, the odd one into three ſections. It is not very common in this country, and therefore our markets have been generally ſupplied with the following.

2. PIMPINELLA SAXIFRAGA: *Pimpinella ſaxifraga minor foliis ſanguiſorbæ Raii; Tragoſelinum alterum majus Tourn.* Smaller burnet-ſaxifrage; with uncut leaves. It grows wild in dry paſture grounds.

3. PIMPINELLA SAXIFRAGA MINOR *C. B. Tragoſelinum minus Tourn.* Small burnet-ſaxifrage; with the upper leaves divided into oblong narrow ſegments; taller than the others, but with ſmaller leaves. This is the moſt common ſort in the fields about London.

ALL theſe plants appear to be poſſeſſed of the ſame qualities, and to differ little otherwiſe than in external appearance: and even in this, their difference is ſo inconſiderable and inconſtant, that Linnæus has joined them into one ſpecies, under the name of *pimpinella foliis pinnatis, foliolis radicalibus ſubrotundis, ſummis linearibus:* he ſays he has ſeen the ſecond ſort produced from the ſeeds of the firſt ſown in a richer ſoil. Inſtead of the firſt, which has been generally underſtood

as

as the officinal kind, our college allows either of the others to be taken indifferently.

The roots of pimpinella have a hot, pungent, not very durable taſte; and emit, when freſh, an acrid halitus, of no particular ſmell, but affecting the eyes like that of horſeradiſh or muſtard ſeed, though in a lower degree. In drying, they loſe this ſubtile matter, and in long keeping the pungency of their taſte is diminiſhed. Their virtue is extracted, partially by water, and completely by rectified ſpirit. In diſtillation with water, a part of their pungency ariſes and impregnates the diſtilled fluid, and a part remains behind in the decoction: when large quantities are diſtilled, there ſeparates from the water a ſmall portion of a yellowiſh eſſential oil extremely acrid and fiery. On inſpiſſating the ſpirituous tincture, little or nothing of the virtue of the pimpinella riſes with the ſpirit: the remaining extract, ſmall in quantity, is of great pungency and heat. The leaves and ſeeds of the plant have likewiſe a conſiderable acrimony; the leaves leſs than the ſeeds, and both leſs than the roots.

This pungent root is in great eſteem among the Germans, as a warm ſtimulating reſolvent, aperient, diaphoretic, &c. in weakneſs of the ſtomach from viſcid phlegm, infarctions of the breaſt, tumours and obſtructions of the glands, impurities of the blood, and in general wherever tenacious humours are to be attenuated, or the fluid ſecretions promoted. It is an uſeful ingredient in our officinal compound arum powder, ſupplying in good meaſure the pungency which the arum root loſes in being reduced into that form. It is employed alſo as a maſticatory for ſtimulating the ſalival glands; and in gargariſms for diſſolving viſcid mucus in the fauces.

PIN-

PINGUEDO.

PINGUEDO ſive adeps: Sevum ovillum & hircinum, Axungia porcina & viperina. ANIMAL FATS: ſheeps ſuet, goats ſuet, hogs lard, and vipers fat.

THE medical uſe of theſe ſubſtances is wholly external, as the baſis of ointments and other unctuous applications. In their effects, they do not ſeem to differ materially from one another; all of them having one common emollient virtue, ſupplying and relaxing the part to which they are applied, and obſtructing its perſpiration. The principal difference to be conſidered in them is that of their conſiſtence, by which they are adapted to different forms, or for receiving different admixtures; the ſolid *ſeva* ſerving to give the thick conſiſtence of an unguent to oils and the more fluid reſinous juices, while the ſofter *axungiæ* procure a like conſiſtence to ſolid reſins and powders. The fat of the viper is commonly preferred to the others in affections of the eyes; but its ſuperiority, in theſe caſes, to other ſoft fats, does not appear to have been ſufficiently determined by experience. Nor indeed does it appear, that animal fats, and flavourleſs vegetable oils, of ſimilar conſiſtences, are materially different, reſpectively, from one another, in their effects when uſed in external applications. Even in regard to qualities, more remote than thoſe, by which they can act when applied to the external parts of the body, the difference between the vegetable and animal fats is, perhaps, leſs than might be expected, and apparently leſs than that which is obſerved between the other correſponding ſubſtances of

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the two kingdoms, as the gelatinous matters of the one and the gummy of the other: animal fats, in their reſolution by fire, yield neither the peculiar ſtench, nor the volatile alkaline ſalt, which ſubſtances completely animalized afford.

Lard and ſuet are directed to be tried or purified, by chopping them into ſmall pieces; melting them by a gentle heat, with the addition of a little water, which ſecures them from any danger of burning or turning black, this fluid not being ſuſceptible of a degree of heat ſufficient for that effect; and then ſtraining them from the membranes. Vipers fat, ſeparated from the heart, liver, and other bloody parts, is ordered to be melted without addition, and then ſtrained through a linen cloth; the quantity of this fat, uſually purified at a time, being ſo ſmall, that the heat may be eaſily regulated, ſo as to prevent burning, without water. Adipis ſuillæ ſevique ovilli curatio *Ph. Lond.*

Tried lard is formed into an elegant ointment, commonly called pomatum, by beating it with roſewater, in the proportion of three ounces of the water to two pounds of the lard, till they are well mixed; then melting it over a very gentle fire, and after ſtanding for a little while, that the watery part may ſettle, pouring off the lard, and inceſſantly ſtirring and beating it about till it grows cold, ſo as to reduce it into a light yielding maſs; and afterwards adding ſo much eſſence of lemons as will be ſufficient to give a grateful ſmell. Some ſcent it with oil of rhodium; and previouſly digeſt the lard for ten days with common water, renewing the water every day, a proceſs which does not appear to be of much uſe. Theſe ointments may be tinged of a fine red colour, for lip-ſalves, by a proper addition of alkanet root: the faculty of Paris directs, for this purpoſe, twenty-four parts of Unguentum adipis ſuillæ *Ph. Lond.* Pomatum rubrum *Ph. Pariſ.*

of the white pomatum, eight of oxes marrow, and eight of white wax cut in ſmall pieces, to be melted together by the heat of a water bath; one part of powdered alkanet root to be added; the mixture ſtirred at times till it appears tinged of a deep red colour, and then ſtrained through a linen cloth.

Animal fats are not diſſoluble by ſpirit of wine any more than by water: when ſcented with eſſential oils, the oil may be totally extracted by digeſtion in rectified ſpirit, ſo as to leave the fat inodorous. By the ſame menſtruum, fats may be freed from their ill ſmell, and even thoſe that have grown conſiderably rancid by keeping may be made ſweet again as at firſt; the rancidity and ſmell ſeeming to conſiſt in a part of the fat attenuated, or ſubtilized, into a ſtate analogous to that of the oil into which fats are reſolved by diſtillation, which oil is totally diſſoluble in ſpirit.

PINGUICULA.

PINGUICULA: Sanicula montana flore calcari donato C. B. Pinguicula ſive ſanicula eboracenſis Gerard. Viola paluſtris, liparis, cucullata, & dodecatheon plinii quibuſdam. Pinguicula vulgaris Linn. BUTTERWORT or YORKSHIRE SANICLE: a ſmall plant, with a few, oblong, obtuſe, uncut, pale, gloſſy, unctuous leaves, lying on the ground; among which riſe naked pedicles, bearing, each, a purpliſh monopetalous flower divided into two lips (of which the upper is cut like a heart, the lower into three ſections) with a ſlender cylindrical ſpur or tail at bottom: the flower is followed by a roundiſh capſule full of ſmall ſeeds. It is perennial, grows wild in elevated

elevated marſhy grounds, and flowers in the ſpring.

The remarkable unctuoſity of this plant, and of ſome others of the ſame genus, ſeems to entitle them to a further examination than has yet been beſtowed upon them *(a)*. It is ſaid, that the unctuous and glutinous juice of the *pinguicula* is uſed in ſome places as a liniment for chaps *(b)*, and as a pomatum for the hair *(c)*: that new milk, poured upon the freſh leaves, on a ſtrainer, and after quick colature, ſet by for a day or two, becomes thick, tenacious, very agreeable and ſalubrious, and throws off no whey unleſs long kept; and that a little of the milk, ſo thickened, ſerves for bringing freſh milk to the ſame ſtate *(d)*: that a ſyrup made from the juice, and decoctions of the leaves in broth, are uſed among the common people in Wales as cathartics: and that the herb is hurtful to cattle that feed upon it *(e)*.

PIPER.

PEPPER: the ſmall, round, aromatic fruit of a trailing plant growing in Sumatra, Java, and Malabar, *(Piper nigrum Linn.)* The pepper-corns adhere in cluſters to the ſtalks, without pedicles: when ripe, they are firm, not juicy, of a red colour, which changes in drying to a black.

(a) Linnæus, *Flora lapponica, p.* 10.
(b) Simon Paulli, *Quadripartit. botanic.*
(c) Ray, *Hiſtoria plantarum,* i. 752.
(d) Giſsler, *Suenſka vetenſkaps academiens handl.* 1749.
(e) Gerard, *Herbal emaculated, p.* 789.

1. Piper

1. PIPER NIGRUM *Pharm. Lond. & Edinb. Melanopiper.* Common or black pepper: the fruit gathered, probably, before perfect maturity, and dried in the ſun.

2. PIPER ALBUM. *Leucopiper.* White pepper: the ripe fruit decorticated by maceration in water. Some of the grains, as brought to us, have pieces of a dark-coloured ſkin ſtill upon them.

OF theſe pungent hot ſpices, the black ſort is the hotteſt and ſtrongeſt, and moſt commonly made uſe of for medicinal as well as culinary purpoſes. They both ſeem to heat the conſtitution more than ſome other ſpices that are of equal pungency upon the palate; and from thoſe ſpices they differ in this, that their pungency does not reſide in the volatile parts or eſſential oil, but in a ſubſtance of a more fixt kind, which does not riſe in the heat of boiling water.

Pepper, infuſed in water, impregnates the menſtruum pretty ſtrongly with its flavour, but weakly with its taſte: by boiling for ſome time, a little more of its pungent matter is extracted, and its flavour diſſipated. On collecting the fluid that exhales in the boiling, the water is found agreeably impregnated with the odour of the ſpice, but ſcarcely diſcovers any taſte: the eſſential oil, which riſes to the ſurface of the water, thin, light, and limpid, in ſmell ſtrong and agreeable, is in taſte mild; a drop or two impreſſing on the tongue only a moderate grateful warmth. On inſpiſſating the decoction, a part of the pungency of the pepper is found in

in the mucilaginous extract, and a part is retained by the pepper itself.* *(a)*

Rectified spirit extracts completely the active matter of the pepper. The tincture is extremely hot and fiery, a few drops setting the mouth as it were in a flame: inspissated, it leaves an extract still more fiery; the spirit carrying off in its exhalation a little of the flavour, but nothing of the heat or pungency of the spice. The quantity of extract is nearly the same from both kinds of pepper; the spirituous amounting to about one eighth, and the watery to near one half their weight: but those of the white, like the spice in substance, are weaker than those of the black sort.

PIPER LONGUM.

PIPER LONGUM Pharm. Lond. & Edinb. Macropiper Pharm. Paris. Piper longum orientale C. B. LONG PEPPER: the fruit of an East Indian plant of the same genus with that which produces the black pepper, *(Piper longum Linn.)*; of a cylindrical figure, about an inch and a half in length, having numerous minute grains disposed round it in a kind of spiral direction.

THIS spice is hotter and more pungent than either of the preceding kinds, and its spirituous extract is proportionably more fiery. In pharmaceutic properties, it entirely agrees with them; its active matter being only partially dissoluble in watery menstrua, and its pungency not rising in the heat of boiling water. Decoc-

* *(a)* The acrid matter of pepper is so strongly retained, that a quantity boiled successively in fresh parcels of water, had not lost all its taste till the forty-third boiling. *Gaubii Adversar.*

tions of it are very mucilaginous, rather more ſo than thoſe of the black or white.

PIPER JAMAICENSE.

PIMENTO Pharm. Lond. Pimenta ſive piper jamaicenſe Pharm. Edinb. Amomum Pharm. Wirtemb. JAMAICA PEPPER, PIMENTO, ALL-SPICE: the dried aromatic berry of a large tree growing in the mountainous parts of Jamaica, reckoned a ſpecies of myrtle, and called by Sir Hans Sloane *myrtus arborea aromatica foliis laurinis*, by Linnæus *myrtus (pimenta) foliis alternis.*

PIMENTO is a moderately warm ſpice, of an agreeable flavour, ſomewhat reſembling that of a mixture of cloves, cinnamon, and nutmegs. Diſtilled with water, it yields an elegant eſſential oil, ſo ponderous as to ſink in the aqueous fluid, in taſte moderately pungent, in ſmell and flavour approaching to oil of cloves, or rather a mixture of thoſe of cloves and nutmegs: the remaining decoction, inſpiſſated, leaves an extract ſomewhat ungrateful but not pungent, and the berry itſelf is now found to be almoſt wholly deprived of its taſte as well as flavour; the warmth of this ſpice reſiding rather in the volatile than in the fixt parts. To rectified ſpirit it imparts, by maceration or digeſtion, the whole of its virtue, together with a browniſh green tincture: in diſtillation, it gives over nothing conſiderable to this menſtruum, nearly all its active matter remaining concentrated in the inſpiſſated extract; which is very warm and pungent, but not of a fiery heat like thoſe obtained from the foregoing ſorts of pepper.

This ſpice, at firſt brought over for dietetic uſes, has been long employed in the ſhops as a ſuccedaneum

ſuccedaneum to the more coſtly oriental aromatics; from them it was introduced into our hoſpitals, and is now received both in the London and Edinburgh pharmacopœias. A ſimple water is directed to be diſtilled from it, in the proportion of a gallon or ten pounds from half a pound: this is ſtrongly impregnated with the flavour of the pimento, though it is leſs elegant than the ſpirituous water which the ſhops have been accuſtomed to prepare, by drawing off two or three gallons of proof ſpirit from the ſame quantity of the ſpice. The Edinburgh college directs only nine pounds from this quantity. The eſſential oil does not ſeem to be much known in practice; though it promiſes to be a very uſeful one, and might, doubtleſs, on many occaſions, ſupply the place of many of the dearer oils. The quantity of oil afforded by the ſpice is very conſiderable: Cartheuſer indeed ſays, that only about half a dram is to be got from ſixteen ounces; a miſtake, which probably has ariſen from inadvertence in copying Neumann's proportion, of half a dram from an ounce, or one ſixteenth: ſo large a proportion as this laſt cannot, however, be collected in its proper form, the oil that remains diſſolved in the diſtilled water being here included.

Aq. pimento *Ph. Lond.*
Aq. piperis jamaicenſis *Ph. Ed.*
Spir. pimento *Ph. Lond.*
Aq. piper. jamaic. ſpirit. *Ph. Ed.*
Ol. eſſent. pip. jamaic. *Ph. Ed.*

PIPER INDICUM.

PIPER INDICUM Pharm. Lond. & Edinb. Capſicum Pharm. Pariſ. Piper indicum, braziliianum, guineenſe, calecuticum, hiſpanicum, & luſitanicum, quibuſdam. Capſicum ſiliquis longis propendentibus Tourn. Siliquaſtrum plinii J. Bauh. Capſicum annuum Linn. CAPSICUM or GUINEA PEPPER: long, roundiſh, taper, bright red pods, divided into two or three cells full of ſmall

whitiſh ſeeds: the fruit of an annual plant, with ſquare ſtalks, oblong acuminated leaves, and white flowers growing in their boſoms divided into five ſegments in form of a ſtar; a native of the Eaſt and Weſt Indies, and raiſed in ſome of our gardens.

This fruit, when freſh, diſcovers to the organs of ſmell, a penetrating acrid halitus, which in drying is diſſipated: its taſte, whether freſh or dry, is extremely pungent and acrimonious, ſetting the mouth as it were on fire, and producing a painful burning vellication of long continuance, like that occaſioned by arum root, but more of the warm aromatic kind. It gives out its pungency to rectified ſpirit, together with a pale yellowiſh red tincture: the ſpirit, gently diſtilled off, has no conſiderable impregnation from the capſicum: the remaining extract is inſupportably fiery.

Capſicum is ſometimes given, in minute quantities, as one of the higheſt ſtimulants, in cold ſluggiſh phlegmatic temperaments, in ſome paralytic caſes, in relaxations and inſenſibility of the ſtomach, and for promoting the efficacy of aloetic medicines and the deobſtruent gums in uterine diſorders. It is uſed principally at table: a ſpecies of it, called in the Weſt Indies bird-pepper, is the baſis of the powder brought from thence under the name of Cayenne pepper. It is obſervable that this fruit, perhaps the ſtrongeſt of the aromatic ſtimulants, is uſed freely, as is ſaid, by the natives even of the warm climates: poſſibly theſe pungent antiſeptic kinds of ſubſtances may there be more ſalubrious than they are, in general, among us, as they ſeem qualified to reſiſt or correct the putre-

dinous

dinous colliquation of the humours which immoderate heat produces.

PIX.

PIX LIQUIDA Pharm. Lond. & Edinb. TAR: a thick, black, reſinous, very adheſive juice; melted out by fire from old pines and fir-trees. The trees, cut in pieces, are incloſed in a large oven, which being heated by a fire on the outſide, or the wood itſelf kindled and ſmothered, the juice runs off by a canal at the bottom.

TAR differs from the turpentine or native reſinous juice of the trees, in having received a diſagreeable empyreumatic impreſſion from the fire; and in containing, along with the pungent bitter terebinthinate matter, a portion of the acid which is extricated from the wood by the heat, and likewiſe of its gummy or mucilaginous matter. By the mediation of theſe principles, a part of the terebinthinate oil and reſin becomes diſſoluble in watery liquors, which extract little or nothing from the purer turpentines.

Water impregnated with the more ſoluble parts of tar has been recommended as a remedy for almoſt all diſeaſes. The proportions that have been commonly followed are, two pounds of tar to a gallon of water; which are to be well ſtirred together, then ſuffered to ſettle for two days, and the clear liquor poured off for uſe. It is obſerved, that "tar water, when right, is "not paler than French, nor deeper coloured "than Spaniſh white wine, and full as clear: "if there be not a ſpirit very ſenſibly perceived "in drinking, the tar-water is not good. It "may be drank either cold or warm. As to

" the quantity, in common chronical indiſpo-
" ſitions a pint a day may ſuffice, taken on an
" empty ſtomach, at two or four times: more
" may be taken by ſtrong ſtomachs. But thoſe
" who labour under great and inveterate mala-
" dies, muſt drink a greater quantity, at leaſt
" a quart every twenty-four hours. In acute
" diſeaſes, it muſt be drank in bed warm, and
" in great quantity (the fever ſtill enabling the
" patient to drink) perhaps a pint every hour."
Though this medicine is undoubtedly very far inferiour to the character that has been given of it, it is apparently capable of anſwering important purpoſes, as a deobſtruent balſamic ſolution, moderately warm and ſtimulating. It ſenſibly raiſes the pulſe, and increaſes either perſpiration or the groſſer evacuations. I have been informed of ſome late inſtances of its good effects in diſorders of the leprous kind.

Some have imagined the acid to be the principle that gives virtue to tar-water; and hence have endeavoured to introduce, inſtead of the infuſion, an acid ſpirit extracted from tar by diſtillation. But the effects of this, as of other acids, are oppoſite to thoſe experienced from tar-water; nor does the acid of tar differ from that which is extricated by fire from all kinds of recent wood. Tar-water, diſtilled, yields a liquor very conſiderably impregnated with its flavour, though more grateful than the infuſion itſelf both in ſmell and taſte: there remains a light, ſpongy, blackiſh ſubſtance, not acid but bitter, partially diſſoluble again in water.

Pil. piceæ *Noſocom. Ed.*

This juice is ſometimes given alſo in ſubſtance, mixed with ſo much powdered liquorice, or other like powdery matters, as is ſufficient to render it of a due conſiſtence for being formed into

into pills. An ointment, made by melting it with an equal weight of mutton ſuet, and ſtraining the mixture whilſt hot †, or by melting together five parts of tar and two of yellow wax ‡, is ſometimes uſed as a digeſtive, and ſaid to be particularly ſerviceable againſt ſcorbutic and other cutaneous eruptions.

† Unguent. e pice *Pb. Lond.*

‡ *Pb. Ed.*

On inſpiſſating tar, or boiling it down to dryneſs without addition, it gives over an acid liquor in conſiderable quantity, and an ethereal oil of the ſame general nature with that of turpentine, but impregnated with the empyreumatic flavour of the tar. The ſolid reſiduum is the common pitch, *pix arida. Pix ſicca, palimpiſſa dioſcoridis C. B.* This is leſs pungent, and leſs bitter than the liquid tar, and uſed only in ſome external applications, as a warm adheſive reſinous ſubſtance. Neumann obſerves, that when melted with oils, reſins, and fats, into ointments and plaſters, the pitch is greatly diſpoſed to ſeparate and precipitate.

PLANTAGO.

PLANTAIN: a ſmall perennial herb, common in fields and by road ſides; with the leaves lying on the ground; and naked unbranched ſtalks, bearing on the top a ſpike of ſmall imperfect four-leaved flowers, followed by little capſules, which, opening horizontally, ſhed numerous crooked ſeeds.

1. PLANTAGO *Pharm. Edinb. Plantago latifolia ſinuata C. B. Plantago ſeptinervia. Plantago major, Linn.* Common greater plantain: with oval leaves, having ſeven ribs, prominent on the lower ſide, running from end to end; and long ſlender ſpikes.

2. PLANTAGO MINOR *ſeu quinquenervia: Plantago major anguſtifolia C. B. Plantago lanceolata J. B. Plantago lanceolata Linn.* Narrow-leaved plantain or ribwort: with oblong, five-ribbed leaves; and ſhort thick ſpikes.

THE leaves and ſeeds of plantain, recommended as vulneraries, in phthifical complaints, ſpittings of blood, alvine fluxes, &c. appear to be of the milder kind of reſtringents or corroborants. The leaves, of no remarkable ſmell, are in taſte ſlightly acerb: their expreſſed juice, depurated by ſettling and colature, or clarified with white of eggs, and inſpiſſated to the conſiſtence of honey, diſcovers a conſiderable ſaline auſterity. The two ſorts are not ſenſibly different in quality from one another, though the firſt has been generally directed for medicinal uſe in preference to the other. The leaves are, in ſome places, the uſual application made by the common people to ſlight wounds.

* For the uſe of a ſpecies of plantain, with horehound, in the bite of the rattleſnake, ſee the art. *Marrubium.*

PLUMBUM.

PLUMBUM Pharm. Lond. LEAD: a pale, livid, ſoft, very flexible metal: above eleven times ſpecifically heavier than water; fuſible in a ſmall heat, ſomewhat leſs than that in which expreſſed oils begin to boil. Continued in fuſion it contracts a various-coloured pellicle on the ſurface, and if kept ſtirring, ſo as that freſh ſurfaces may be expoſed to the air, it changes by degrees into a powdery duſky-coloured calx: this powder, calcined for ſome time in a ſtronger fire, in ſuch a manner that the flame may reverberate

verberate all over it, becomes first yellow, and afterwards of a deep red colour†: all these calces, if the fire be hastily raised to a considerable degree, melt into the appearance of oil, and on cooling form a soft flaky pulverable substance called litharge‡, of a pale yellowish or reddish colour, according as the lead has been less or more calcined: if the calces be urged with a pretty strong fire, they run into a yellowish glass, which, while in fusion, powerfully dissolves most kinds of earthy bodies, and corrodes the common crucibles till it has saturated itself with their earth.

† Minium *Ph. Lond.*

‡ Lithargyrus *Ph. Lond. & Ed.*

The ores of lead, in colour commonly resembling lead itself, and of a cubical or parallelopipedal structure, are plentiful in England and other parts of the world. The metal, extracted from the ore by fusion, contains frequently a portion of silver, and sometimes of gold: on keeping the compound melted in a due degree of heat, the lead calcines and turns to litharge, which is raked or blown off till the noble metals remain pure; all the other common metallic bodies being scorified and carried off by the lead. From the works, wherein silver is thus extracted from lead in the large way, the shops are supplied with litharge; which, when pale coloured, is called litharge of silver; when high coloured, litharge of gold. The latter is to be preferred, not as containing any of the metal by whose name it is distinguished, but as being more thoroughly calcined than the pale sort: the pale may be freed from the uncalcined lead it holds, by melting it; the uncalcined part falling to the bottom during the fusion.

The nitrous acid, diluted with about an equal quantity of water, dissolves lead pretty readily into

into a gold-coloured liquor: by the vitriolic and marine acids it is very difficultly acted on; and when previously dissolved in the nitrous, it is by either of these precipitated. Vegetable acids, digested on lead in substance, dissolve it exceeding sparingly: by certain managements they may be made to act more vigorously, and to satiate themselves with the metal.

Thin plates of lead, suspended over vinegar in a proper vessel, and set to digest in a gentle heat, as that of horse-dung, that the acid vapour may rise and circulate round the plates, are found, in about twenty days, covered with a white powdery or flaky matter: this being scraped off, and the process repeated, the whole of the metal is thus corroded by degrees into cerusse or white lead. This commodity, the preparation of which makes a considerable trade, is frequently adulterated with a mixture of whiting: the entire flaky masses, called flake lead, should be chosen, as not being liable to abuse. The adulteration may be discovered by means of vinegar, which will effervesce with and dissolve the whiting or calcareous earth: the liquor being then poured off clear, or filtered, the addition of a little spirit of salt will precipitate such part of the lead as the vinegar may have taken up; after which the calcareous earth will manifest itself on adding a little vitriolic acid.

Cerussa *Ph. Lond. & Ed.*

The calces of lead are much easier of solution in vegetable acids than lead in its metallic form. On digesting four ounces of litharge about three days in a sand heat with a pint of strong vinegar, and now and then shaking the vessel; the liquor, filtered, is found to have received a strong impregnation from the litharge, and to have dissolved about one tenth of it, whereas,

Acetum lithargyrites.

whereas, of the ſame quantity of lead in ſubſtance, ſcarcely one hundredth part would be diſſolved. Lead even in its vitreous ſtate, or in the glazing of the common earthen-ware veſſels, is conſiderably acted on by vegetable acids; which, by being boiled in thoſe veſſels receive from them the peculiar taſte, and pernicious qualities of ſaturnine ſolutions.—Lead may be diſcovered in acid liquors by a reddiſh, brown, or blackiſh colour being produced in them on adding a few drops of a ſolution of orpiment or common ſulphur made in lime-water, and by the colour not being deſtroyed on the ſuperaddition of a little ſpirit of ſalt *(a)*: other metals, diſſolved in vegetable acids, produce, as well as lead, a dark colour with the ſulphureous ſolutions, but ſpirit of ſalt rediſſolves them, and totally diſcharges the colour.

Of all the ſaturnine calces, the ceruſſe, on account of the corroſion it has previouſly undergone from the ſteam of vinegar, is the moſt eaſily diſſoluble in freſh vinegar, and hence is made choice of where a ſaturated ſolution is required. The ſolution made in vinegar, inſpiſſated to the conſiſtence of honey and ſet in the cold, ſhoots by proper management into cryſtals, called, from their taſte, *ſugar* of lead. All the ſolutions, and ſoluble preparations of this metal, have a remarkably ſweet taſte, mixed with a conſiderable auſterity.

Ceruſſa acetat. *Ph. Lond.*

Sal plumbi *vulgo* ſacch. ſaturni *Ph. Ed.*

Lead in its metallic form, or when calcined by fire, does not appear to have any medicinal operation: diſſolved or rendered ſoluble

(a) The browniſh or reddiſh colour produced by alkalies in cyder impregnated with lead, is totally diſcharged by ſpirit of ſalt. *M. S. of Dr. Lewis.*

by

by acids, it is one of the moſt powerful ſtyptics, but at the ſame time, for internal uſes, one of the moſt dangerous. A few grains of the ſugar have been ventured on for checking obſtinate hemorrhagies and other profuſe evacuations: a tincture drawn with rectified ſpirit, by maceration without heat, from ſugar of lead and green vitriol, in the proportion of three ounces of the ſugar and two of the vitriol, to a quart of ſpirit, has been given from fifteen to thirty drops, for reſtraining the colliquative ſweats attending phthiſes and hectic fevers. This practice has in ſome inſtances been ſucceſsful, but the hazard is very great: all the ſaturnine preparations that have any activity are in a peculiar manner injurious to the nervous ſyſtem, and ought never to be ventured on but in deſperate caſes as a laſt reſource. Obſtinate conſtipations, violent colics, pains and contractions of the limbs, tremors and reſolutions of the nerves, and ſlow waſting fevers, are the general conſequences of ſaturnines taken in any conſiderable quantities internally, and of the fumes to which the workmen are expoſed in the fuſion of the metal in the way of buſineſs *(a)*.

Tinct. ſaturnina *vulgo* antiphthiſica *Ph. Ed.*

Externally, this metal and its preparations are of ſufficient ſafety and of great utility. The plaſter, in general uſe for ſlight cutaneous injuries, and which makes the baſis of ſeveral other plaſters, is a ſolution of litharge in oil olive, in the proportion of five pounds of the litharge, ſubtilely powdered, to eight pints† or ten pounds‡ of the oil. The union is effected by

Empl. litharg. † *Ph. Lond.* commune ‡ *Ph. Ed.*

(a) Vide Hoffman, *Philoſophia corp. human. morboſi, P.* II. *cap.* viii. §. 20. *& ſeq.* Hundert mark, *Acta acad. cæſareæ nat. curioſ. vol.* vii. *Append. p.* 96.

the

boiling them together over a gentle fire, with the addition of about a quart of water to prevent their burning, and keeping them continually ſtirring, till they incorporate and acquire a due conſiſtence: if all the water ſhould be conſumed before this happens, ſome more water, previouſly made hot, is added. A red plaſter is prepared in the ſame manner with minium inſtead of litharge, but as it does not ſtick ſo well as the other, it is more rarely uſed: it is likewiſe more difficult of preparation, the compound being very apt, though a conſiderable quantity of water be uſed, to burn and grow black in the boiling. Emp. e minio.

The ceruſſe and ſugar, particularly the latter, are cooling, drying, and aſtrictive: the ſugar is uſed in collyria for inflammations and defluxions of the eyes, and in injections for reſtraining ſimple gonorrhœas; and both preparations in unguents and liniments, againſt cutaneous heats and excoriations, ſlight ſerpiginous eruptions, and for anointing the lips of wounds or ulcers that itch much or tend to inflammation. Compoſitions for theſe purpoſes are made in the ſhops, by mixing one part of ceruſſe with five of the ſimple ointment made with oil and wax; by grinding two ounces of litharge, and adding, alternately and by little and little, two ounces of vinegar and ſix of oil†; or by boiling and ſtirring, over a gentle fire, four ounces of the common plaſter, with one of vinegar, and two of oil where a thick unguent is required‡, or four of oil for a ſofter liniment‖: this laſt is a leſs troubleſome method of uniting the litharge with the oil and vinegar, than trituration; and the compoſition proves likewiſe more ſmooth and uniform, and leſs liable to grow hard in keeping

Ung. e ceruſſa, *vulgo* album *Ph. Ed.*

† Ung. nutritum.

‡ Ung. tripharmacum

‖ Lin. tripharmacum.

keeping *(a). But the moſt elegant and effectual of all the ſaturnine unguents, are thoſe made with the ſugar; in the proportion of half an ounce† to a pint of oil and three ounces of white wax; or one part, to twenty parts of the ſimple oil and wax ointments‡*(b).

Ung. ceruſſ. acet. † *Ph. Lond.* —ſaturni. ‡ *Ph. Ed.*

* Mr. Goulard, a ſurgeon of Montpellier, has been the means of greatly extending for ſome years paſt the external uſe of lead. The baſis of his preparations is what he calls the *extract of lead*, or a ſolution of litharge in ſtrong vinegar, boiled down to almoſt a ſyrupy conſiſtence. This, diluted in a large quantity of ſoft water, makes his *vegeto-mineral water*, which is employed as a lotion or fotus, or boiled with bread to make a cataplaſm. The extract is likewiſe combined with unguentous matters into a variety of forms. Theſe preparations have, in fact, been found of the greateſt utility in various caſes of inflammation, particularly of the eryſipelatous kind, and the conſequences of burns and ſcalds. Their moſt liberal application has not, in the opinion of moſt practitioners, been obſerved to produce any of thoſe affections of the nervous ſyſtem, which characterize the poiſonous effects of lead taken internally. At the ſame time, the abuſe of ſaturnine applications, on the ground of thoſe

*(a) The *ung. nutritum*, made without heat, though now expunged from our diſpenſatories, is much the beſt of the above preparations, and a very excellent application in many caſes. It ſhould not be long kept, but made freſh as wanted.

*(b) Theſe are by no means the efficacious preparations here repreſented. The oil and wax ſo cover the metallic ſalt, that its action is prevented; or, if it acts at all, it proves highly ſtimulating from the *undiſſolved* ſtate in which it is applied.

falſe

falſe and inconſiſtent ideas of their action which Mr. Goulard has ſupported, has not infrequently been attended with diſagreeable conſequences.

* The London college have now given a preparation ſimilar to Goulard's *extract*, directing two pounds and four ounces of litharge to be boiled in a gallon of diſtilled vinegar till reduced to ſix pints, continually ſtirring the liquor, and ſtraining it after ſubſidence. They have likewiſe given another, ſimilar to Goulard's vegeto-mineral water, in which two drams of this preparation, with as much proof ſpirit, are mixed with a quart of diſtilled water. Aq. litharg. acetat. *Ph. Lond.* Aq. litharg. acetat. comp. *Ph. Lond.*

POLIUM.

POLEY-MOUNTAIN: a ſmall ſhrubby plant, with ſquare ſtalks, oblong woolly leaves ſet in pairs; and labiated flowers wanting the upper lip and having the lower divided into five ſegments.

1. *Polium maritimum erectum monſpeliacum C. B. Teucrium capitatum Linn.* Poley-mountain of Montpellier; with the leaves indented towards the end and joined to the ſtalk without pedicles, the flowers white and ſet in roundiſh ſpikes on the tops of the branches.

2. *Polium anguſtifolium creticum C. B. Teucrium fruteſcens, ſtœchados arabicæ folio & facie Tourn. Teucrium creticum Linn.* Poley-mountain of Candy; with the leaves not indented and ſet on ſhort pedicles, the flowers ſtanding in looſe cluſters, each on a ſeparate foot-ſtalk.

Several other ſpecies, or varieties of *polium*, erect and procumbent, with white, yellow, and purpliſh

purpliſh flowers, have been received in the ſhops. The ſecond above deſcribed has been commonly underſtood as the true officinal ſort, and procured dry from the iſland Candy, of which it is a native: the firſt, which better bears the winters of our own climate, appears to be of the ſame quality; and hence the college allow either ſort to be taken indifferently.

THE leaves and tops of poley-mountain have a moderately ſtrong aromatic ſmell, and a diſagreeable bitter taſte: diſtilled with water, they yield a ſmall quantity of yellowiſh eſſential oil, of a pungent taſte, in ſmell leſs agreeable than the herb itſelf; the remaining decoction, inſpiſſated, leaves a ſtrongly bitter extract. They ſtand recommended as corroborants, aperients, and antiſpaſmodics; but are at preſent ſcarcely otherwiſe made uſe of than as an ingredient in mithridate and theriaca.

POLYGALA.

MILKWORT: a ſmall perennial plant; with the leaves alternate, uncut, and thoſe on the upper parts of the ſtalks larger than on the lower; the flowers irregular, tubulous, tripetalous, labiated, ſet in looſe ſpikes on the tops; the cup compoſed of five leaves, the two larger of which continue after the flower has fallen, and embrace, like wings, a flat bicellular ſeed-veſſel.

1. SENEKA *Lond. & Pharm. Edinb. Polygala (Senega) floribus imberbibus ſpicatis, caule erecto herbaceo ſimpliciſſimo, foliis lato-lanceolatis Linn.* Seneka or Senegaw milkwort, rattleſnake-rooted milkwort: with oblong, ſomewhat oval, pointed leaves;

leaves; upright unbranched ſtalks; white flowers; and a variouſly bent and divaricated jointed root, about the thickneſs of the little finger, with a membranous margin running its whole length on each ſide, externally of a yellowiſh or pale browniſh colour, internally white. It is a native of Virginia, Penſylvania, and Maryland, and cultivated in ſome of our gardens.

The root of this plant is ſaid to be the ſpecific of the Senegaw Indians againſt the poiſon of the bite of the rattleſnake; and to be effectual, when uſed early, even in the middle of the ſummer heats, when the poiſon is in its higheſt vigour, and when all their other antidotes fail. The powder or a decoction of the root is taken internally; and either the powder, or cataplaſms made with it, applied to the wound.

Dr. Tennent, obſerving that this poiſon produces ſymptoms reſembling thoſe of pleuriſies and peripneumonies (a difficulty of breathing, cough, ſpitting of coagulated blood, and a ſtrong quick pulſe) conjectured that it might be ſerviceable in thoſe diſtempers alſo: and from the trials made by the gentlemen of the French academy, as well as thoſe mentioned by him, its virtues appear to be great. It made the ſizy blood fluid, procured a plentiful ſpitting, increaſed perſpiration and urine, and ſometimes purged or vomited. The uſual doſe was thirty or thirty-five grains of the powder; or three ſpoonfuls of a decoction prepared by boiling three ounces of the root in a quart of water till near half the liquor was conſumed.

The ſeneka root has been tried likewiſe in hydropic caſes, and found in ſome inſtances to procure a copious evacuation by ſtool, urine, and perſpiration, after the common purgatives

and diuretics had failed. Monſ. Bouvart obſerves, that though dropſies were thus removed by the ſeneka, the cure did not ſeem complete, a ſwelling and hardneſs of the ſpleen remaining, which ſometimes occaſioned a freſh extravaſation: that the medicine ſometimes acts by liquefying the blood and juices, without producing a due diſcharge; and that in theſe caſes it does harm unleſs aſſiſted by proper additions, but that ſo long as it proves cathartic, nothing is to be feared from it. It is ſaid to have been found ſerviceable alſo in the rheumatiſm and gout.

This root, of no remarkable ſmell, has a peculiar kind of ſubtile pungent penetrating taſte. Its virtue is extracted both by water and ſpirit, though the powder in ſubſtance is ſuppoſed to be more effectual than either the decoction or tincture. The watery decoction, on firſt taſting, ſeems not unpleaſant, but the peculiar pungency of the root quickly diſcovers itſelf, ſpreading through the fauces, or exciting a copious diſcharge of ſaliva, and frequently, as Linnæus obſerves, a ſhort cough: thoſe to whom I have directed this medicine, have generally found a little Madeira moſt effectual for removing its taſte from the mouth, and making it to ſit eaſy on the ſtomach.

Decoct. ſenekæ *Ph. Ed.* The Edinburgh college direct a decoction made with one ounce of the root boiled in two pounds of water to ſixteen ounces. A tincture of the root in rectified ſpirit is of a more fiery pungency, extremely durable in the mouth and throat, and apt to promote vomiting or reaching.

2. Polygala: *Polygala vulgaris C. B. & Linn. Flos ambarvalis.* Common milkwort: with the ſtalks procumbent; the lower leaves roundiſh, the upper oblong, narrow, and pointed;

ed; the flowers blue, purplish or red, sometimes white, with a kind of fringed appendix on the lower lip; the roots slender and hard. It grows wild in dry pasture grounds.

The roots of this species are somewhat similar in taste to those of the preceding, but far weaker: they have been found likewise to produce the same effects in pleurisies, in a lower degree. The leaves of the plant are very bitter: Gesner, who from this quality gives it the name of *amarella*, relates, that an infusion of a handful of them in wine is a safe and gentle purgative.

POLYPODIUM.

POLYPODIUM vulgare C. B. & Linn. Polypody: a plant with long leaves issuing from the root, divided on both sides, down to the rib, into a number of oblong segments, broadest at the base: it has no stalk, or manifest flower: the seeds are a fine dust, lying on the backs of the leaves, in roundish specks, which are disposed in rows parallel to the rib: the roots are long and slender, of a reddish brown colour on the outside, greenish within, full of small tubercles, which are resembled to the feet of an insect, whence the name of the plant. It grows in the clefts of old walls, rocks, and decayed trees: that produced on the oak has been generally accounted the best, though not sensibly different from the others. It is found green at all seasons of the year.

The leaves of polypody have a weak ungrateful smell, and a nauseous sweet taste, leaving a kind of roughness and slight acrimony in the mouth. They give out their smell and taste,

together with a yellow colour, both to water and rectified ſpirit: the ſpirituous tincture is ſweeter than the watery, but in inſpiſſation its ſweetneſs is in great part deſtroyed or covered by the other matter; the ſpirituous extract, as Cartheuſer obſerves, being to the taſte only ſubaſtringent and ſubacrid, with very little ſweetneſs, while the watery extract ſeems to retain the full ſweetneſs of the polypody. The root is ſuppoſed to be aperient, reſolvent, and expectorant: it was formerly ranked among the purgatives, but operates ſo weakly, a decoction of an ounce or two ſcarcely moving the belly, that it has long been expunged from that claſs: the preſent practice pays very little regard to it in any intention.

POPULUS.

POPULUS NIGRA C. B. & Linn. Populus nigra ſive aigeiros J. B. BLACK POPLAR: a large tree; with dark green, ſomewhat rhomboidal acuminated leaves; producing imperfect flowers, in catkins: in ſome of the individuals, called male, the flowers are barren; in others, called female, they are followed by membranous pods, containing a number of ſeeds winged with down. It is indigenous in watery places, and quick of growth.

THE young buds or rudiments of the leaves, which appear in the beginning of the ſpring, were formerly employed in an officinal ointment, which received its name from them. At preſent, they are almoſt entirely diſregarded; though they ſhould ſeem, from their ſenſible qualities, to be applicable to purpoſes of ſome importance. They abound with a yellow, unctuous,

tuous, odorous, balſamic juice, which they readily impart, by maceration or digeſtion, to rectified ſpirit. The tincture, inſpiſſated, yields a fragrant reſin, ſuperiour to many of thoſe brought from abroad, and approach to the nature of ſtorax.

* A ſpecies of poplar growing in Siberia and in North America, called by Linnæus *Populus balſamifera*, is ſaid to be much more abundant in balſamic juice than the former, inſomuch that the buds give it out on mere expreſſion *(a)*.

PRUNELLA.

PRUNELLA ſive Brunella. Prunella major folio non diſſecto C. B. Conſolida minor. Symphitum minus. Prunella vulgaris Linn. SELF-HEAL: a ſmall plant; with ſquare ſtalks; oval uncut leaves ſet in pairs on pedicles; and ſhort thick ſpikes of purpliſh labiated flowers. It is perennial, grows wild in paſture grounds, and flowers in June and July.

THIS herb is recommended as a mild reſtringent and vulnerary, in ſpittings of blood, and other hemorrhagies and fluxes: and in gargariſms againſt aphthæ and inflammations of the fauces. Its virtues do not appear to be very great: to the taſte it diſcovers a very ſlight auſterity or bitteriſhneſs; which is more ſenſible in the flowery tops than in the leaves; though the latter are generally directed for medicinal uſe.

PRUNUS.

PRUNUS: a tree with pentapetalous white flowers; each of which is ſucceeded by a round-

(a) Bergius, *Mat. Med.* 804.

iſh or oval fruit, ſtanding on a long pedicle, compoſed of a fleſhy pulp including a flat ſtone pointed at both ends.

1. PRUNUS HORTENSIS. *Prunus domeſtica Linn.* Garden plum tree: without prickles; bearing a ſweet fruit. Three ſorts of this fruit are ranked among the articles of the materia medica: they are all met with in our gardens, but the ſhops are ſupplied with them, moderately dried, from abroad. 1. PRUNA BRIGNOLENSIA. *Pruna ex flavo rufeſcentia mixti ſaporis gratiſſima C. B.* The Brignole plum or prunelloe, brought from Brignole in Provence, of a reddiſh yellow colour, and a very grateful ſweet ſubacid taſte. 2. PRUNA GALLICA *Ph. Lond. & Edinb. Pruna parva dulcia atro-cærulea C. B.* The common or French prunes, called by our gardeners the little black damaſk plum. 3. PRUNA DAMASCENA: *Pruna magna dulcia atro-cærulea C. B.* Damſons, the larger damaſk violet plum of Tours: this is ſeldom kept in the ſhops, and has been generally ſupplied by the common prune.

All theſe fruits poſſeſs the ſame general qualities with the other ſummer fruits. The prunelloes, in which the ſweetneſs has a greater mixture of acidity than in the other ſorts, are uſed as mild refrigerants in fevers and other hot indiſpoſitions, and are ſometimes kept in the mouth for alleviating thirſt in hydropic caſes. The French prunes and damſons are the moſt emollient, lubricating and laxative: they are taken by themſelves for gently looſening the belly in coſtive habits and where there is a tendency to inflammation: decoctions of them afford an uſeful baſis for laxative or purgative mixtures,

mixtures, and the pulp in ſubſtance for electuaries.

2. PRUNUS SILVESTRIS *Pharm. Lond. & Edinb. & C. B. Acacia Germanorum. Prunus ſpinoſa Linn.* Black thorn or ſloe: a prickly buſh, common in hedges, producing auſtere fruit, ſomewhat ſmaller than an ordinary cherry.

THE fruit of the ſloe buſh is ſo harſh and auſtere, as not to be eatable till thoroughly mellowed by froſts. The juice expreſſed from it while unripe, or before it has been thus mellowed, inſpiſſated by a gentle heat to dryneſs, is called German acacia, and has been uſually ſold in the ſhops for the Egyptian juice of that name; from which it differs in being harder, heavier, darker coloured, of a ſharper or tarter taſte, and more remarkable in this, that it gives out its aſtringency in good meaſure to rectified ſpirit as well as to water, whereas that of the Egyptian acacia is not at all diſſoluble in ſpirit. A conſerve of this fruit is likewiſe prepared in the ſhops, by mixing the pulp with thrice its weight of double-refined ſugar: the ſloes being previouſly ſteeped in water, over the fire, with care that they do not burſt, till they are ſufficiently ſoftened to admit of the pulp being preſſed out through a ſieve. In ſome places, the unripe ſloes are dried in an oven, and then fermented with wines or malt liquors, for a reſtringent diet drink in alvine and uterine laxities.

Conſerv. pruni ſylveſtris. *Ph. Lond.* prunor ſylveſtrium *Ph. Ed.*

The bark, both of the branches and of the roots, is ſaid to have been given with ſucceſs in intermitting fevers, and by ſome ſtands recommended as equal to the Peruvian bark. It is apparently a ſtrong ſtyptic; and its ſtyptic matter is of that kind which is not eaſily extracted by watery menſtrua.

The flowers, in ſmell very agreeable, and in taſte bitteriſh, appear to have a laxative virtue, like thoſe of the peach tree or the damaſk roſe. They impregnate water, by diſtillation, ſtrongly with their fragrance; and give out their active matter, by infuſion, both to water and ſpirit. The watery infuſion, ſweetened with ſugar, or made into a ſyrup, is ſaid to be a very uſeful purgative for children.

PSYLLIUM.

PSYLLIUM Pharm. Pariſ. Pulicaris herba Lugdun. Pſyllium majus erectum C. B. Plantago Pſyllium Linn. FLEAWORT: an herb of the plantain kind, differing from the common plantains in being annual, and having its ſtalks branched, with leaves upon them, which are long, ſlender, and ſomewhat hairy. It grows wild in the warmer parts of Europe, and is ſometimes raiſed in our gardens. The ſeeds have been uſually brought from the ſouth of France: they are ſmall, ſmooth, ſlippery, of a ſhining brown colour, of an oblong flattiſh figure ſuppoſed to reſemble that of a flea, whence the name of the plant.

THE ſeeds of fleawort have a nauſeous mucilaginous taſte, and no remarkable ſmell: a dram renders near a pint of water ſlimy and yellowiſh: the decoction, inſpiſſated, leaves a ſtrong dark brown mucilage, which impreſſes on the palate an unpleaſant, weak, but penetrating acrimony. This mucilage has been employed chiefly in emollient glyſters, in gargariſms for hoarſeneſs and aſperity of the fauces, and in external applications for chaps of the lips and inflammations of the eyes. Proſper Alpinus relates,

lates, that among the Egyptians, the mucilage or an infuſion of the ſeeds is given internally, in ardent fevers; and that it generally either looſens the belly or promotes ſweat. The particular virtue of theſe ſeeds, or whatever virtue they may have diſtinct from that of mucilaginous ſubſtances in general, appears to reſide in the acrid matter, which may be ſeparated from the mucilaginous by rectified ſpirit: the ſeeds, digeſted in rectified ſpirit, give out their acrimony and ill taſte, and yield afterwards to water an almoſt inſipid mucilage.

PTARMICA.

PTARMICA, Pſeudopyrethrum, Pyrethrum ſilveſtre, Draco ſilveſtris, Tarchon ſilveſtris, Sternutamentoria: Dracunculus pratenſis ſerrato folio C. B. Achillæa Ptarmica Linn. SNEEZEWORT or BASTARD PELLITORY: a plant with long narrow leaves finely ſerrated about the edges, and radiated diſcous white flowers ſet in form of umbels on the tops of the branches. It is perennial, grows wild on heaths and in moiſt ſhady grounds, and is found in flower from June to the end of ſummer.

THE roots of this plant have a hot biting taſte, approaching to that of pyrethrum, with which they nearly agree alſo in their pharmaceutic properties, and to which they have been ſometimes ſubſtituted in the ſhops. They are by ſome recommended internally as a warm ſtimulant and attenuant; but their principal uſe is as a maſticatory and ſternutatory.

PULEGIUM.

PENNYROYAL: a plant of the mint kind; differing from the mints ſtrictly ſo called, in the flowers being diſpoſed, not in ſpikes on the tops, but in thick cluſters, at diſtances, round the joints of the ſtalks; and the upper ſegment of the flower not being nipped at the extremity.

1. PULEGIUM *Pharm. Lond. & Edinb. Pulegium latifolium C. B. Mentha paluſtris ſive pulegium Pharm. Pariſ. Pulegium regium Ger. emac. Mentha pulegium Linn.* Common pennyroyal: with ſomewhat oval obtuſe leaves, and trailing ſtalks, ſtriking root at the joints. It grows wild on moiſt commons and in watery places, and flowers in June.

2. PULEGIUM ERECTUM: *Pulegium erectum officinarum Dale: Pulegium mas Ger. emac.* Upright pennyroyal; with the ſtamina ſtanding out from the flowers; ſaid to be a native of Spain, common in our gardens, and uſually ſubſtituted in our markets to the foregoing ſpecies.

3. PULEGIUM CERVINUM: *Pulegium anguſtifolium C. B. Mentha aquatica ſatureiæ folio Tourn. Mentha cervina Linn.* Harts pennyroyal, with ſmall oblong narrow leaves; ſaid to grow wild about Montpellier.

ALL the pennyroyals are warm pungent herbs, ſomewhat ſimilar to mint, but more acrid and leſs agreeable both in ſmell and taſte, leſs proper in common nauſeæ and weakneſs of the ſtomach,

mach, more efficacious as warm carminatives and deobſtruents in hyſteric caſes and diſorders of the breaſt: the laſt ſpecies is the ſtrongeſt, though leaſt ungrateful, of the three. Their active principle is an eſſential oil; of a more volatile nature than that of mint, coming over haſtily with water at the beginning of the diſtillation, and riſing alſo in great part with highly-rectified ſpirit; in taſte very pungent, and of a ſtrong ſmell; when newly drawn, of a yellowiſh colour with a caſt of green; by age turning browniſh. The oil, and a ſimple† and ſpirituous‡ water ſtrongly impregnated with it, by drawing off a gallon of water or proof ſpirit from a pound and a half of the dry leaves, are kept in the ſhops.

Ol. pulegii eſſent. *Ph. Lond.*

Aq. pulegii *Ph. Lond.* & *Ed.*†

Spirit. pulegii *Ph. Lond.*‡

PULMONARIA.

PULMONARIA MACULOSA. Symphytum maculoſum ſive pulmonaria latifolia C. B. Pulmonaria officinalis Linn. SPOTTED LUNGWORT, JERUSALEM COWSLIPS, JERUSALEM SAGE: a hairy ſcabrous plant, with the leaves of a dark browniſh green colour on the upper ſide and ſpotted for the moſt part with white, underneath of a paler green, the lower oval and ſet on broad pedicles, thoſe on the ſtalks narrower, long-pointed, ſet alternately, without pedicles: the flowers are monopetalous, cut into five ſections, of a purple or blue colour, and ſometimes white, followed each by four ſeeds incloſed in the cup. It is perennial, grows wild in ſeveral parts of Europe, and flowers in our gardens in April and May.

The leaves of pulmonaria, recommended in hemoptoës, tickling coughs, aſperities of the ſauces, &c. appear to be of little medicinal virtue.

tue. The dried leaves have hardly any ſmell; and their taſte is juſt perceptibly mucilaginous, ſweetiſh, and roughiſh. They ſeem to be nearly of the ſame nature with the *adianthum* and *trichomanes*.

*PULSATILLA.

PULSATILLA NIGRICANS Stœrck, Pharm. Edinb. Pulſatilla flore minore nigricante C. B. Anemone pratenſis Linn. A ſpecies of anemone, much reſembling the *pulſatilla vulgaris*, or paſque flower, but its flower is leſs, and of a darker hue. It is a native of the ſouth of Germany, and other neighbouring countries.

All the anemonies have a conſiderable degree of acrimony; but this ſeems to poſſeſs the largeſt ſhare. The whole plant when chewed impreſſes the tongue with a ſharp, burning, durable taſte. The root is milder than the other parts. On diſtilling the plant with water, the liquor which comes over is ſtrongly impregnated with its virtues; and the remaining extract is alſo conſiderably active.

Dr. Stœrck of Vienna, to whom the introduction of ſo many of the more powerful vegetables is owing, has likewiſe recommended this to the medical practitioner. From numerous trials, he celebrates its efficacy in various chronic diſeaſes of the eye; in venereal nodes and nocturnal pains; in foul ulcers with caries; in ſerpigo; and ſuppreſſed menſes. He relates inſtances of its curing blindneſs of many years continuance, by diſſipating and diſſolving films and obſcurities of the cornea. In theſe caſes, its good effects were firſt indicated by conſiderable pain excited in the eye. The ſenſible operation of the medicine was nauſea and vomiting,

vomiting, particularly when the diſtilled water was uſed; an increaſed flow of urine; and ſometimes gripes and looſeneſs; with increaſed pain at firſt in the affected part. From all theſe circumſtances, the pulſatilla ſeems to be endued with very active and penetrating powers, yet ſuch as may be employed with perfect ſafety if proper caution be uſed. The doſe of the diſtilled water to adults is about half an ounce, twice or thrice a day; of the extract, reduced to powder with the addition of ſugar, five or ſix grains. Bergius mentions having given the extract copiouſly, eſpecially in diſeaſes of the eyes, but without any effect *(a)*.

The Edinburgh college had adopted the diſtilled water of pulſatilla, but has now changed it for the extract. Extract. folior. pulſatillæ nigricantis *Ph. Ed.*

PYRETHRUM.

PYRETHRUM Pharm. Lond. & Edinb. Pyrethrum flore bellidis C. B. Chamæmelum ſpecioſo flore, radice longa fervida Shaw afr. Dentaria, herba ſalivaris, & pes alexandrinus quibuſdam. Anthemis Pyrethrum Linn. PELLITORY of SPAIN: a trailing perennial plant; with finely divided leaves ſomewhat like thoſe of camomile or fennel; and naked thick ſtalks, bearing each a large flower, which conſiſts of a yellow diſk ſurrounded with petala of a pure white colour on the upper ſide, and a fine purple underneath: the root, which ſinks deep in the ground like a carrot, is of a browniſh colour on the outſide and whitiſh within. It is a native of the warmer climates, but bears the cold of our own, and often produces flowers in ſucceſſion from January to May: the roots alſo, as Parkinſon

(a) Mat. Med. 491.

obſerves,

obſerves, grow larger with us, than thoſe which the ſhops are ſupplied with from abroad.

PELLITORY root has a very hot pungent taſte, without any ſenſible ſmell. Its pungency reſides in a reſinous matter, of the more fixt kind; being extracted completely by rectified ſpirit, and only in ſmall part by water; and not being carried off, in evaporation or diſtillation, by either menſtruum. The ſpirituous extract is extremely fiery, but in ſmall quantity, ſcarcely amounting to one twentieth of the weight of the root. The watery infuſion is nauſeous, but ſcarcely diſcovers any acrimony till concentrated by inſpiſſation; when reduced to the conſiſtence of an extract, it proves conſiderably pungent: the quantity of this extract is commonly five or ſix times as large as that of the ſpirituous. The root remaining, after the action of water, yields ſtill with rectified ſpirit a very fiery extract; whereas that, which has been digeſted in ſpirit, yields with water only an inſipid mucilaginous ſubſtance.

The principal uſe of pyrethrum, in the preſent practice, is as a maſticatory, for ſtimulating the ſalival glands, &c. and evacuating viſcid humours from the head and parts adjacent: by this means it frequently relieves tooth-achs, ſome kinds of head-achs, lethargic complaints, and paralyſes of the tongue. It has ſometimes likewiſe been given internally, from a few grains to a ſcruple, as a hot ſtimulant and attenuant, in paralytic and rheumatic diſorders.

PYRITES.

MARCASSITA Pharm. Pariſ. PYRITES or MARCASITE: a hard foſſil; ſtriking fire with ſteel,

ſteel, copiouſly, and in large ſparks; becoming vitriolic, either by ſimple expoſure to the air, or by calcination and ſubſequent expoſure.

THIS mineral varies extremely in its appearances. It is found of a bright braſs yellow, of a greeniſh, of a grey or whitiſh colour, and of different intermediate or mixt ſhades: in maſſes, rarely of any great ſize, globular, oblong and flattiſh, cubical, octoedral, dodecaedral; ſometimes covered with a coat or cruſt, but oftener bare; internally ſometimes ſtriated, and ſometimes of an even and ſimple ſtructure *(a)*. It is met with in different places of this kingdom, and in moſt parts of the world; on the ſurface of the earth, on the ſea ſhores, in clay pits, embedded in earthy and ſtony bodies of various kinds.

The pyritæ conſiſt, in general, of ſulphur, iron, and unmetallic earth: in ſome, a little copper is joined to the iron; and in ſome, copper is the prevailing metal. In ſome, particularly the yellow kind, the quantity of ſulphur is large: in others, particularly the white, both the ſulphur and metal are in ſmall proportion.

If artificial mixtures of ſulphur with iron or copper be gently calcined, the inflammable principle of the ſulphur exhales, and its acid remains united with the metal, forming therewith a ſaline vitriolic compound: a mixture of iron filings and ſulphur, moiſtened with water, ſuffers a like change without external heat, and if the quantity is large, burſts ſpontaneouſly into fire. A reſolution of the ſame kind happens in the natural pyritæ on expoſing them to the air and rain; provided, where they are very ſul-

(a) See Henckel's *Pyritologia oder kieſs-hiſtorie.*

phureous,

phureous, a part of the ſulphur be previouſly diſſipated by calcination. On this expoſure, they all become powdery and acquire a vitriolic taſte, the ferrugineous much more eaſily than thoſe which have any admixture of copper: ſome ſhoot out efflorescences of vitriol upon the ſurface: from others, the ſaline matter, waſhed off by rain, is found to conſiſt chiefly of the ſulphureous or vitriolic acid. If the pyritæ, even ſuch as have the leaſt ſulphureous and metallic impregnation, as thoſe from which the Engliſh vitriol is made, be laid in large heaps, they grow hot, and take fire, and emit, during the burning, ſtrong diffuſive ſulphureous vapours. *(a)*.

The pyritæ, in ſubſtance, are never uſed medicinally; but in their products they are very important. It is from theſe, that common ſulphur is extracted, in Sweden and Saxony; that the native vitriols are produced in caverns of the earth or on its ſurface; that the greateſt quantities of artificial vitriol are prepared; and that the chalybeate mineral waters are ſuppoſed to receive their impregnation: ſee the reſpective articles.

* *QUASSIA.*

QUASSIA Pharm. Lond. & Edinb. Lignum Quaſſiæ Amænit. Acad. vol. vi. *Bois de Coiſſi Fermin Surinam.* QUASSY ROOT: the woody root of a tree growing in Surinam, called by Linnæus, *Quaſſia amara*, of the claſs and order decandria monogynia in his ſyſtem. This root is as thick as a man's arm. Its wood is whitiſh, hard, ſolid, and tough, becoming yellowiſh on

(a) Dr. Slare, *Philoſophical tranſactions, numb.* 213.

expoſure

expoſure to the air. It is covered by a thin, grey, fiſſured, and brittle bark.

QUASSI ROOT has no ſenſible odour. Its taſte is that of a pure bitter, more intenſe and durable than that of almoſt any other known ſubſtance. Its watery infuſions and decoctions, and its ſpirituous tinctures, are all almoſt equally bitter, of a pale yellowiſh hue, which is not blackened by the addition of martial vitriol. The watery extract is from a ſixth to a ninth of the weight of the wood; the ſpirituous about a twenty-fourth. The bark of the root is reckoned in Surinam more powerful than the wood. The flowers alſo are a ſtrong bitter.

THE medical uſe of the quaſſi has been a conſiderable time known in Surinam. The flowers were long ago employed by the natives as an excellent ſtomachic. The root was a ſecret remedy uſed by a negro, named Quaſſi, in the fatal fevers of that country, from whom it was purchaſed by Dan. Rolander, a Swede, who returned from thence in 1756. Some ſpecimens of the wood and of the fructification were, in 1761, preſented by M. Dahlberg to the celebrated Linnæus; who drew up a botanical deſcription of the plant, with an account of its virtues, and publiſhed it in the ſixth vol. of the *Amæni. Acad.* A confirmation of its medical powers appeared in a letter from Mr. Farley, a practitioner in Antigua, printed in the *Phil. Tranſact.* vol. lviii. He found it remarkably efficacious in ſuppreſſing vomitings, ſtopping a tendency to putrefaction, and removing fevers. It ſeemed capable of producing all the good effects of Peruvian bark, without heating. Some further experiments on the quaſſi are

contained in a late medical theſis by Dr. Ebeling. He confirms the general account of its virtues, with this additional circumſtance, that though its general antiſeptic powers were inferiour to thoſe of Peruvian bark, yet it preſerved bile a longer time from putrefaction. In this circumſtance it agrees with another pure bitter, the columbo root.

From theſe relations, the quaſſi appears to be a valuable addition to our tonic remedies, and has therefore obtained a place in the laſt Edinburgh and other pharmacopœias. It may be uſed either in infuſion, or extract: the latter, made into pills, on account of the intenſe bitterneſs of the drug, is preferable for delicate ſtomachs.

QUERCUS.

QUERCUS Lond. & Pharm. Edinb. Quercus cum longis pediculis C. B. Quercus Robur Linn. OAK: a large tree, with oblong leaves, widening from the bottom to the extremity, and ſinuated or bluntly indented about the edges: the fruit is an acorn, or kernel with a coriaceous covering, incloſed at bottom in a ſcaly cup. It is a common foreſt tree in moſt parts of Europe.

THE bark of the oak is a ſtrong aſtringent, accompanied with a moderate bitterneſs, but no remarkable ſmell or particular flavour: with ſolution of chalybeate vitriol it ſtrikes an inky blackneſs. It is ſaid to have been employed with ſucceſs, not only for reſtraining hæmorrhagies, and other immoderate evacuations, but likewiſe in intermitting fevers and in gleeting gangrenous wounds and ulcers; in which caſes,

caſes, an extract made from it is ſaid by ſome to be equal to that of the Peruvian bark. A decoction of it uſed as a fomentation is ſaid to have cured a procidentia recti *(a)*. It gives out its virtue both to water and rectified ſpirit.

QUERCUS MARINA.

QUERCUS MARINA ſive fucus veſiculoſus: Fucus maritimus ſive quercus maritima veſiculas habens C. B. Fucus veſiculoſus Linn. SEA WRACK or SEA OAK: a ſoft, very ſlippery, marine plant; common upon rocks that are left dry at the ebb tide; with the leaves ſomewhat reſembling in ſhape thoſe of the oak tree; the ſtalks running along the middle of the leaves, and terminated by warty bladders containing either air or a ſlippery fluid. The veſicles begin in March to fill with a thin juice; and about the end of July they burſt, and diſcharge a matter as thick as honey.

DR. RUSSEL relates, that he found this plant an uſeful aſſiſtant to ſea water in the cure of diſorders of the glands: that he gave it in powder to the quantity of a dram, and that in large doſes it nauſeated the ſtomach: that by burning in the open air it was reduced into a black ſaline powder, which ſeemed, as an internal medicine, greatly to excel the officinal burnt ſponge; which was uſed with benefit, as a dentifrice, for correcting laxities of the gums; and which ſhewed a notable degree of detergent virtue by its effect in cleaning the teeth: that the juice of the veſicles, after ſtanding to putrefy, yielded, on evaporation, an acrid pungent ſalt, amount-

Æthiops vegetabilis *Dr. Ruſſel.*

(a) Med. Eſſ. Edinb. ii. 257.

ing to about a ſcruple from two ſpoonfuls: that the putrefied juice, applied to the ſkin, ſinks in immediately, excites a ſlight ſenſe of pungency, and deterges like a ſolution of ſoap: that one of the beſt applications for diſcuſſing hardneſs, particularly in the decline of glandular ſwellings, is a mixture of two pounds of the juicy veſicles, gathered in July, with a quart of ſea water, kept in a glaſs veſſel for ten or fifteen days, till the liquor comes near to the conſiſtence of very thin honey: the parts affected are to be rubbed with the ſtrained liquor twice or thrice a day, and afterwards waſhed clean with ſea water.

* *RADIX LOPEZIANA.*

RADIX INDICA LOPEZIANA Pharm. Edinb. Radix Indica a Joanne Lopez denominata Gaubii Adverſar. Cap. vi. *Rais di Juan Lopez Luſitanis.* The root of an unknown tree, growing, as ſome aſſert, at Goa, as others ſuppoſe, in Malacca, from whence it is ſometimes brought to Batavia. It is met with in pieces of different thickneſs, ſome, at leaſt, of two inches diameter. The woody part is whitiſh, and very light; ſofter, more ſpongy, and whiter next the bark, including a denſer ſomewhat reddiſh medullary part. The bark is rough, wrinkled, brown, ſoft, and as it were woolly, pretty thick, covered with a thin paler cuticle.

NEITHER the woody nor cortical part has any remarkable ſmell or taſte, nor any appearance of reſinous matter. On boiling in water, no odour is emitted; and the ſtrained liquor, which is of a yellow hue, is almoſt inſipid, only impreſſing the tongue with a very light obſcure bitteriſhneſs;

bitterifhneſs; and without viſcidity. The extract obtained by evaporating the decoction is equally void of ſenſible activity. Rectified ſpirit is tinged by the root of a brown colour, but acquires no particular taſte. After drawing off the ſpirit from the tincture, a matter remains reſembling balſam, which bubbles and inflames in the fire, and has a bitteriſh taſte, like that of opium.

Though the preceding examination of this root is not favourable to the opinion of its medical powers, yet it is regarded in the Eaſt Indies as a medicine of extraordinary efficacy in diarrhœas; and the learned Gaubius, in his *Adverſaria*, has publiſhed an account of ſome experiments made with it, which in ſome degree confirm its reputation. From his own trials, and thoſe of his friends, it appeared moſt remarkably effectual in ſtopping colliquative diarrhœas which had reſiſted the uſual remedies. Thoſe attending the laſt ſtage of conſumptions were particularly relieved by its uſe. It ſeemed to act not by any aſtringent power, but by a faculty of reſtraining and appeaſing ſpaſmodic and inordinate motions in the inteſtines. Gaubius compares its action to that of ſimarouba, but thinks it more efficacious than this medicine.

The mode of exhibiting it in India, is to levigate the root with water on a porphyry till reduced to a fine pulp. In Europe the powder of it has been given with any proper vehicle, in doſes from fifteen to thirty grains, repeated three or four times a day: one practitioner found a tincture of it in common ſpirits equally effectual with the root in ſubſtance. Of this, a teaſpoonful was given thrice a day in red wine. The colleges of Edinburgh and Brunſwick have

received this root into their catalogues; but it is ſcarcely yet to be met with in the ſhops.

RANUNCULUS.

CROWFOOT: a plant with pentapetalous flowers ſet in five-leaved cups; followed each by a round cluſter of naked ſeeds. It is perennial.

1. RANUNCULUS. *Ranunculus pratenſis radice verticilli modo rotunda C. B. Ranunculus bulboſus Linn.* Bulbous crowfoot, butter flower, gold cup: with a round tuberous root about the ſize of an olive; the leaves divided commonly into three ſegments, and theſe further ſubdivided; the ſtalks erect: the flowers of a bright gloſſy yellow, and their cups turned downwards. It is common in paſture grounds, and flowers in May.

2. FLAMMULA: *Ranunculus longifolius paluſtris minor C. B. Ranunculus Flammula Linn.* Smaller water crowfoot or ſpearwort: with fibrous roots, long narrow leaves acuminated at both ends, and leaning or procumbent ſtalks. It grows in watery places or moiſt meadows, and flowers in June.

THE roots and leaves of theſe plants are of no conſiderable ſmell, but in taſte highly acrid and fiery. Taken internally, they appear to be deleterious, even when ſo far freed from the cauſtic matter, by boiling in water, as to diſcover no ill quality to the palate. The effluvia likewiſe even of the leſs acrid ſpecies or varieties cultivated in gardens, when freely inſpired, have occaſioned headachs, anxieties, vomitings, and

ſpaſmodic

ſpaſmodic ſymptoms. The leaves and roots, applied externally, inflame and exulcerate or veſicate the part, and are liable to affect alſo the adjacent parts to a conſiderable extent(*a*): they have ſometimes, particularly among empyrics and the common people, ſupplied the place of the far ſafer and not leſs effectual veſicatory, cantharides, for procuring an ulcer and diſcharge of ſerum, in ſciaticas and ſome fixt pains of the head. Their pungency is diminiſhed by drying, and by long keeping ſeems to be diſſipated or deſtroyed.

RAPHANUS.

RAPHANUS RUSTICANUS Pharm. Lond. & Edinb. & C. B. Cochlearia folio cubitali Tourn. Cochlearia Armoracia Linn. HORSERADISH: a plant reſembling ſcurvygraſs in the flowers and ſeeds, but differing in the leaves being very large and long, and indented about the edges. It is ſometimes found wild about the ſides of ditches and rivulets, but for medicinal and culinary uſes is cultivated in gardens. It is perennial, flowers in June, rarely perfects its ſeeds, and is propagated from tranſverſe cuttings of the roots.

HORSERADISH root affects the organs both of taſte and ſmell with a quick penetrating pungency: it nevertheleſs contains in certain veſſels a ſweet juice, which ſometimes exudes in little drops upon the ſurface. Its pungent matter is of a very volatile kind; being totally diſſipated in drying, and carried off in evaporation or

(*a*) Willis, *Pharmaceutice rationalis*, *P.* II. *ſect.* iii. *cap.* 3.

distillation both by water and rectified spirit: as the pungency exhales, the sweet matter of the root becomes more sensible, though this also is in great measure dissipated or destroyed. It impregnates both water and spirit, by infusion or by distillation, very richly with its active matter: in distillation with water it yields a small quantity of essential oil exceedingly penetrating and pungent. This root appears therefore to agree with scurvygrass and cresses, and to differ from mustard seed to which it is by some resembled, in the volatility of its pungent matter, and its solubility in spirit.

Horseradish is a moderately stimulating, aperient, and antiseptic medicine: it sensibly promotes perspiration, urine, and the expectoration of viscid phlegm, and excites appetite when the stomach is weakened or relaxed, without being so liable to produce immoderate heat, or inflammatory symptoms, as the stimulants of the aromatic kind. It is principally used in paralytic and rheumatic complaints, in scurvies and scorbutic impurities of the humours, in cachectic disorders, and in dropsies, particularly in those which follow intermitting fevers. Taken in considerable quantities, it provokes vomiting.

RAPUM.

Rapa *sativa rotunda C. B. Brassica Rapa Linn.* Turnep; a plant with a round root; jagged leaves, rude to the touch; tetrapetalous flowers, commonly yellow; and small round smooth reddish or blackish seeds lodged in long pods. The garden turnep is supposed to be a variety produced by culture from the smaller sort which grows wild in sandy grounds in some parts of England. It is biennial.

Turneps

TURNEPS are accounted a ſalubrious food; demulcent, detergent, ſomewhat laxative and diuretic; but liable in weak ſtomachs to produce flatulencies, and prove difficult of digeſtion: the liquor preſſed out from them after boiling, is ſometimes taken medicinally, in coughs and diſorders of the breaſt. The ſeeds have been accounted alexipharmac or diaphoretic: they have no ſmell, but diſcover to the taſte a mild acrimony, ſeemingly of the ſame nature with that of muſtard ſeed, though far weaker.

RHABARBARUM.

RHUBARB: a plant with large dock-like leaves, among which ariſes a ſingle thick ſtalk bearing looſe cluſters of naked monopetalous bell-ſhaped flowers divided into ſix ſegments: each flower contains nine ſtamina (whereof the docks ſtrictly ſo called have but ſix), and is followed by a triangular ſeed ſurrounded about the edges with a leafy margin.

1. RHABARBARUM *Pharm. Lond. Rheum Pharm. Edinb. Lapathum orientale folio latiſſimo undulato & mucronato Mill. dict. Rheum undulatum foliis ſubvilloſis, petiolis æqualibus Linn.* Rhubarb: with the leaves ſomewhat heart-ſhaped, acuminated, and ſlightly hairy, and the pedicles plano-convex. It is a native of China and Siberia, and has lately been raiſed in ſome of our gardens, where it is found to grow with vigour in the open ground *(a)*.

Two

(a) The plant above deſcribed is that which is generally reckoned the true rhubarb plant, having been produced from the ſeeds, ſent from Ruſſia, as thoſe of the true rhubarb to Juſſieu at Paris, Rand at Chelſea, and Linnæus at Upſal.

Two ſorts of rhubarb roots are met with in the ſhops. The firſt is imported from Turkey and Ruſſia, in roundiſh pieces, freed from the bark, with a hole through the middle of each, externally of a yellow colour, internally variegated with lively reddiſh ſtreaks. The other, which is leſs eſteemed, comes immediately from the Eaſt Indies, in longiſh pieces, harder, heavier, and more compact than the foregoing. The firſt ſort, unleſs kept very dry, is apt to grow mouldy and worm-eaten: the ſecond is leſs ſubject to theſe inconveniencies. Some of the more induſtrious artiſts are ſaid to fill up the worm holes with certain mixtures, and to colour the outſide of the damaged pieces with powder of the finer ſorts of rhubarb, and ſometimes with cheaper materials. The marks of the goodneſs of rhubarb are, the livelineſs of its colour when cut; its being firm and ſolid, but not flinty or hard; its being eaſily pulverable, and appearing when powdered of a fine bright yellow colour; its imparting to the ſpittle, on being chewed, a deep ſaffron tinge, and not proving ſlimy or mucilaginous in the mouth. Its taſte is ſubacrid, bitteriſh, and ſomewhat ſtyptic; the ſmell, lightly aromatic.

Rhubarb is a mild cathartic, and commonly looked upon as one of the ſafeſt and moſt innocent of the ſubſtances of this claſs. Beſides

Upſal. Dr. Hope received lately rhubarb ſeeds from the ſame country, which being ſown in the open ground at Edinburgh, produced a different ſpecies, *Rheum palmatum Linnæi*, with the leaves deeply cut into pointed ſegments. He obſerves that the root of this plant, though taken up too young, and at an improper ſeaſon, viz. in July, agreed perfectly with the beſt foreign rhubarb, in colour, ſmell, taſte, and purgative quality. See *Philoſoph. Tranſact.* vol. lv. for the year 1765.——Perhaps the roots of both ſpecies may be of the ſame quality, and taken promiſcuouſly.

its

its purgative virtue, it has a mild aſtringent one, diſcoverable by the taſte, and by its ſtriking an inky blackneſs with chalybeate ſolutions: hence it is found to ſtrengthen the tone of the ſtomach and inteſtines, to leave the belly coſtive, and to be one of the moſt uſeful purgatives in diarrhœas, dyſenteries, and all diſorders proceeding from a debility and laxity of the fibres: it is frequently indeed given with a view rather to this ſtomachic and corroborating virtue, than to its producing any conſiderable evacuation. It tinges the urine of a high yellow colour.

Rhubarb in ſubſtance purges more effectually than any preparation of it: the doſe is from a ſcruple to a dram. By roaſting it with a gentle heat, till it becomes eaſily friable, its cathartic power is diminiſhed, and its aſtringency ſuppoſed to be increaſed. Rhabarb. torrefactum.

In its habitude to menſtrua, it differs remarkably from moſt of the other cathartic drugs, its purgative virtue being extracted far more perfectly by water than by rectified ſpirit: the root remaining after the action of water is almoſt, if not wholly, inactive; whereas, after repeated digeſtion in ſpirit, it proves ſtill very conſiderably purgative: the colour of both tinctures is a fine deep yellow, that of the ſpirituous paleſt; when the rhubarb has given out to ſpirit all that this menſtruum can extract, it ſtill imparts a deep colour, as well as a purgative impregnation, to water. The watery infuſion, in being inſpiſſated by a gentle heat, has its virtue ſo much diminiſhed, that a dram of the extract is ſaid to have ſcarcely any greater effect than a ſcruple of the root in ſubſtance; the ſpirituous tincture looſes leſs; half a dram of this extract proving moderately purgative, though ſcarcely more ſo, than an equal quantity of

of the powder. The ſpirituous extract diſſolves almoſt wholly in water; and hence the tincture does not, like the ſpirituous infuſions of moſt other vegetables, turn milky on being mixed with aqueous liquors: of the watery extract, ſcarce above one fourth is diſſolved by rectified ſpirit, and the part that does not diſſolve proves more purgative than that which does.

Infuſ. rhei *Ph. Ed.*

* A watery infuſion is directed in the Edinburgh pharmacopœia, made by infuſing half an ounce of rhubarb for a night in eight ounces of boiling water, and adding to the ſtrained liquor one ounce of ſpirituous cinnamon water. The

Tinct. rhabarb. comp. *Ph. Lond.*

London has a more compound and warmer infuſion, in which an ounce of rhubarb, with a dram of ginger, a dram of ſaffron, and two drams of liquorice root, are digeſted for a fortnight in half a pint of water and ſix ounces of proof ſpirit.

Tinctures of this root are drawn in the ſhops with proof ſpirit and with mountain wine. The London college directs an ounce of rhubarb with two drams of cardamom ſeeds, and one of ſaffron *(a)*, for a pint of each tincture†: that of Edinburgh, orders for the vinous tincture, two ounces of rhubarb and one dram of canella alba to be infuſed in fifteen ounces of mountain wine, and two of proof ſpirit‡; for the ſimple ſpirituous tincture, three ounces of rhubarb, and half an ounce of leſſer cardamom ſeeds, to two pounds and a half of proof ſpirit‖; in which, ſometimes are diſſolved, four ounces of ſugar candy§; and a compound tincture, com-

† Tinct. rhabarb. vinum Rhabarb. *Ph. Lond.*

‡ Vinum rhei *Ph. Ed.*

‖ Tinct. rhei.

§ Tinct. rhei dulcis.

(a) Saffron does not appear to be a vety proper ingredient in theſe preparations, as it renders the taſte rather more unpleaſant; nor indeed does rhubarb ſeem, for general uſe, to want any aromatic addition.

poſed

poſed of two ounces of rhubarb, half an ounce of gentian, one dram of ſnakeroot, and two pounds and a half of proof ſpirit††. Theſe preparations are uſed chiefly as mildly laxative corroborants, in weakneſs of the ſtomach, indigeſtion, diarrhœas, colicky and other like complaints. The laſt tincture is, in many caſes, an uſeful aſſiſtant to the Peruvian bark in the cure of intermittents.

†† Tinct. rhei amara *Ph. Ed.*

The Turkey rhubarb is, among us, univerſally preferred to the Eaſt India ſort, though this laſt appears to be for ſome purpoſes at leaſt equal to the other. It is manifeſtly more aſtringent, but has ſomewhat leſs of an aromatic flavour. Tinctures made from both with equal quantities of rectified ſpirit, have nearly the ſame taſte: on drawing off the menſtrua, the extract left by the tincture of the Eaſt India rhubarb proves in taſte conſiderably ſtronger than the other. Both ſorts appear to be the produce of the ſame climate, and the roots of the ſame ſpecies of plant, taken up probably at a different ſeaſon, or cured in a different manner.

2. RHAPONTICUM *Pharm. Pariſ. Rhabarbarum dioſcoridis & antiquorum Tourn. Rhaponticum folio lapathi majoris glabro C. B. Rheum Rhaponticum Linn.* Rhapontic: with ſmooth roundiſh leaves, and ſomewhat channelled pedicles. It grows wild on the mountain Rhodope in Thrace, from whence it was brought into Europe by Alpinus about the year 1610: it bears the hardeſt winters of this climate.

The root of this plant, which appears to have been the true rhubarb of the ancients, is by ſome confounded with the modern rhubarb, though conſiderably different from that root in appearance as well as in quality. The rhapontic

tic is of a dusky colour on the surface, and a loose spongy texture; more astringent than rhubarb, and less purgative: in this last intention two or three drams are required for a dose.

*RHODODENDRON.

RHODODENDRON CHRYSANTHEMUM, Pharm. Edinb. Rhododendron Chrysanthum Linn. syst. veg. ed. xiv. This plant, which is a new species of the *rhododendron* of Linnæus, discovered by Professor Pallas, is a shrub growing near the tops of the high mountains named Sajanes, in the neighbourhood of the river Jenisea in Siberia.

It is called by the natives of the place *chei*, or tea, from their commonly drinking a weak infusion of it, as we do the Chinese plant of that name. A stronger preparation of it is, however, used by them as a powerful medicine in arthritic and rheumatic disorders. For this purpose, they take about two drams of the dried shrub, stalk and leaves together, and infuse it in nine or ten ounces of boiling water for a night, in the heat of an oven. This is drunk next morning for a dose; which occasions heat, a degree of intoxication, with a singular uneasy kind of sensation, and a sort of *vermiculation* in the affected parts. The patient is not permitted to quench the thirst this medicine occasions, as liquids, especially cold water, would produce vomiting, and diminish the effect of the remedy. In a few hours, all disagreeable symptoms go off, commonly with two or three stools; and the patient finds his disease greatly relieved. A repetition of the dose twice or thrice generally completes the cure. This is the substance of the account given in a letter from Dr.

Dr. Guthrie, of Peterſburgh, to Dr. Duncan, *Med. Comment.* vol. v. p. 434.

The rhododendron has been ſince tried by Dr. Home in the infirmary at Edinburgh; and the reſult of his trials, as publiſhed in his *Clinical Caſes and Experiments*, is, that it is a very powerful ſedative, remarkably diminiſhing the frequency of the pulſe; but that it was not peculiarly efficacious in removing the acute rheumatiſm.

RICINUS.

RICINUS & ricinoides: large plants, with ſmall flowers in cluſters, and the fruit growing at a little diſtance from, or ſucceeding only a few of, the flowers: the fruit conſiſts of three capſules, containing each a ſingle ſeed, flatted on one ſide, generally about the ſize of a ſmall bean, compoſed of a thin ſkin or ſhell including an oily kernel.

1. RICINUS *Pharm. Lond. & Edinb.* PALMA-CHRISTI *Pharm. Pariſ. Cataputia major, cherva major, kiki, & granum regium quibuſdam: Ricinus vulgaris C. B. Ricinus communis Linn.* Palma-chriſti, Mexico ſeed: with the fruit triangular, the ſeed furniſhed with a little knob at one end, externally variegated with blackiſh and whitiſh ſtreaks, reſembling both in ſhape and colour the inſect *ricinus* or tick.

2. RICINOIDES, *ſeu pineus purgans, vel pinhones indici Pharm. Pariſ. Carcas, nux barbadenſis, & faba purgatrix quibuſdam: Ricinus americanus major ſemine nigro C. B. Jatropha Curcas Linn.* Barbadoes nut: with an oval walnut-like fruit, and oblong black ſeeds.

3. AVELLANA

3. AVELLANA PURGATRIX *C. B. Nuces purgantes Ger. Jatropha multifida Linn.* Purging nut: with oval fruit, and roundiſh, ſomewhat triangular, pale browniſh ſeeds.

4. TIGLIUM, *grana tiglia. Pinus indica nucleo purgante, & lignum moluccenſe foliis malvæ, fructu avellanæ minore, cortice molliore & nigricante, pavana incolis C. B. Croton Tiglium Linn.* Grana tilia: with roundiſh fruit, and dark greyiſh ſeeds in ſhape nearly like thoſe of the firſt ſpecies.

THE firſt of theſe plants is ſaid to be found wild in ſome of the ſouthern parts of Europe: it is biennial. The others are middling ſized trees, natives of America and the Eaſt Indies, from whence the ſeeds are ſometimes brought to us.

THE two firſt of theſe ſeeds are ſweetiſh, nauſeous, and acrid: the third has ſcarcely any acrimony, and taſtes nearly like almonds: the fourth is intenſely hot and acrimonious. They are all ſtrong evacuants, operating, in doſes of a few grains, both upwards and downwards; the ſweet ſpecies not excepted. The grana tilia are the moſt violent, too much ſo to be taken with any tolerable ſafety; and indeed they all appear too draſtic to be ventured on in ſubſtance.

They yield upon expreſſion a conſiderable quantity of oil, impregnated more or leſs with the taſte and the purgative quality of the ſeeds: of the oil of the grana tilia, Geoffroy limits the doſe to one grain, which is probably an error of the preſs for one dram: that of the Barbadoes nut is ſaid to be taken in America in larger quantities,

quantities, and to purge without much inconvenience.

The oil of the palma-chriſti, vulgarly called in America caſtor oil, has been often given from two to four ſpoonfuls, and found to act as a ſufficient mild laxative: it is ſaid to be particularly uſeful in the dry-belly-ach, and in other diſorders where irritating purgatives cannot be borne, and where the common laxatives, on account of the large doſe in which they require to be given, are apt to be rejected by the ſtomach. From ſuch trials as I have made of this medicine, it did not ſeem to have any peculiar good qualities, or to produce any other effects than may be equally obtained by combining the more common purgatives, as tincture or infuſion of ſena, with common oil.—It is ſaid that ſome, or all, of the above oils act as purgatives, when applied externally to the umbilical region.

The wood and leaves of the plants are likewiſe ſtrong cathartics: Hermann relates, that the wood of the tilia, called *panava* or *pavana*, operates violently, when freſh, in the doſe of a ſcruple or half a dram: that when dried and long kept, it is given to the quantity of a whole dram as a purgative, and in ſmaller doſes as a ſudorific. Among us, all theſe ſubſtances are entire ſtrangers to practice (except that the oil of the firſt ſpecies has of late been ſometimes made uſe of;) and, ſo far as can be judged from the accounts given of them, they have little claim to be received.

* Since the above was written, the *Oleum Ricini* has increaſed in reputation, and is now a common remedy in calculous, nephritic, bilious, and various other caſes. It is, however, liable to the inconvenience of much uncertainty

in its operation, owing, probably, to the different modes of preparing the oil, or its different degrees of genuineneſs. One ſpoonful, or half an ounce, is the doſe uſually begun with.

Dr. Wright, in a paper containing an account of the medicinal plants growing in Jamaica, printed in the *London Medical Journal for* 1787, *part* iii. gives the following information concerning this oil.

« Caſtor oil is obtained either by expreſſion or decoction. The firſt method is practiſed in England; the latter in Jamaica. It is beſt prepared in the following manner. A large iron pot or boiler is firſt prepared, and half filled with water. The nuts are then beaten in parcels in deep wooden mortars, and, after a quantity is beaten, it is thrown into the iron veſſel. The fire is then lighted, and the liquor is gently boiled for two hours, and kept conſtantly ſtirred. About this time the oil begins to ſeparate, and ſwims on the top, mixed with a white froth, and is ſkimmed off till no more riſes. The ſkimmings are heated in a ſmall iron pot, and ſtrained through a cloth. When cold, it is put up in jars or bottles for uſe. Caſtor oil thus made is clear and well flavoured, and, if put into proper bottles, will keep ſweet for years. The expreſſed caſtor oil ſoon turns rancid, becauſe the mucilaginous and acrid parts of the nut are ſqueezed out with the oil.

As a medicine, caſtor oil purges without ſtimulus, and is ſo mild as to be given to infants ſoon after birth to purge off the meconium. All oils are noxious to inſects, but the caſtor oil kills and expels them. It is generally given as a purge after uſing the cabbage-bath ſome days. In conſtipation and belly-ach this

oil

oil is uſed with remarkable ſucceſs. It ſits well on the ſtomach, allays the ſpaſm, and brings about a plentiful evacuation by ſtool, eſpecially if at the ſame time fomentations, or the warm bath, are uſed."

ROSA.

ROSE: a prickly buſh; with oval ſerrated leaves, ſet in pairs along a middle rib, which is terminated by an odd one; producing large elegant flowers, whoſe cup is divided into five long ſegments, with a knob at the bottom, which becomes an umbilicated ſoft fruit full of hairy ſeeds.

1. ROSA DAMASCENA *Pharm. Lond. Roſa pallida Pharm. Edinb. Roſa purpurea C. B. Roſa centifolia Linn.* The damaſk roſe: with double flowers, of the fine pale red called from them roſe-colour.

The pleaſant ſmell of damaſk roſes is of a leſs periſhable kind than that of many other odoriferous flowers, not being much diminiſhed in drying, nor ſoon diſſipated in keeping. They impart their odorous matter to watery liquors both by infuſion and diſtillation: ſix pounds of the freſh roſes impregnate, by diſtillation, a gallon or more of water ſtrongly with their fine flavour. On diſtilling large quantities, there ſeparates from the watery fluid a ſmall portion of a fragrant butyraceous oil, which liquefies by heat and appears yellow, but concretes in the cold into a white maſs: an hundred pounds of the flowers, according to the experiments of Tachenius and Hoffman, afford ſcarcely half an ounce of oil. The oil and water, uſed chiefly as perfumes and flavour-

Aq. roſæ *Ph. Lond.*
— roſar. pallid. *Ph. Ed.*

ing materials, are recommended by Hoffman as excellent cordials, for raiſing the ſtrength and ſpirits, and allaying pain. They appear to be of a very mild nature, and not liable to irritate or heat the conſtitution; even the eſſential oil diſcovering to the taſte but little pungency.

Theſe flowers contain likewiſe a bitteriſh ſubſtance; which is extracted by water along with the odoriferous principle; which, after this laſt has been ſeparated by diſtillation or evaporation, is found entire in the remaining decoction; and which appears to be of a gently purgative nature. The decoction, or a ſtrong infuſion of the flowers, made into a ſyrup with a proper quantity of ſugar, proves an uſeful laxative for children, in doſes of a ſpoonful: of the extract obtained by inſpiſſating the decoction, from a ſcruple to a dram is ſaid to be ſufficient for adults. The college of London directs the ſyrup to be made, by preſſing out the liquor remaining after the diſtillation of ſix pounds of damaſk roſes, and boiling it down to three pints; then, after it has ſettled for a night, adding five pounds of fine ſugar, and boiling the mixture to the weight of ſeven pounds and a half: a ſpoonful of this ſyrup appears to be equivalent to about three drams of the freſh flowers. The ſolutive matter of the flowers is combined alſo in the ſame manner, for the purpoſes of glyſters, with brown ſugar and honey: towards the end of the boiling down of the ſtrained decoction, an ounce of cummin ſeeds, bruiſed a little and tied in a linen cloth, is added; and the liquor afterwards boiled with four pounds of brown ſugar and two of honey.

Syrup. roſæ *Pb. Lond.* — roſar. pallid. *Pb. Ed.*

Mel. ſolutiv.

Rectified ſpirit extracts both the odoriferous and the purgative matter of the damaſk roſe, equally

equally with water, or rather more completely. The ſpirit, diſtilled off from the filtered tincture, proves lightly impregnated with the fragrance of the flowers, and the inſpiſſated extract retains likewiſe a part of their flavour along with the bitteriſh matter. This extract, in quantity ſmaller, and in taſte ſtronger, may be preſumed to be more purgative, than that made with water.

2. ROSA RUBRA *Pharm. Lond. & Edinb. Roſa rubra multiplex C. B. Roſa gallica Linn.* The red roſe: with double flowers of a deep red colour.

The red roſe has very little of the fine flavour admired in the pale ſort: to the taſte, it is bitteriſh and ſubaſtringent. The aſtringency is greateſt before the flowers have opened, and, in this ſtate, they are choſen for medicinal uſe as a mild corroborant: the full-blown flowers are probably as laxative as thoſe of the foregoing ſpecies, for Poterius relates, that he found a dram of powdered red roſes occaſion three or four ſtools, and this not in a few inſtances, but conſtantly, in an extenſive practice, for ſeveral years. The aſtringency of the buds is improved by haſty exſiccation in a gentle heat: by ſlow drying, both the aſtringency and the colour are impaired.

The freſh buds, clipt from the white heels, and beaten with thrice their weight of fine ſugar, form an agreeable and uſeful conſerve; which is given in doſes of a dram or two, diſſolved in warm milk, in weakneſſes of the ſtomach, coughs, and phthiſical complaints. Inſtances are mentioned in the German ephemerides, and in Riverius's praxis, of very dangerous phthiſical diſorders being cured by

Conſerva roſarum *Ph. Lond. & Ed.*

the continued uſe of this medicine: in one of theſe caſes, twenty pounds of the conſerve were taken in the ſpace of a month, and in another upwards of thirty pounds. Mixtures of the roſes with a larger proportion of ſugar are made in the ſhops into lozenges: one part of the buds clipt from the heels and haſtily dried, and twelve parts of fine ſugar, are ſeparately reduced into powder, then mixed, and moiſtened with ſo much water as will render them of a due conſiſtence for being formed: or the conſerve is mixed with as much freſh ſugar as is ſufficient to bring it to a like conſiſtence, that is, about thrice its own weight.

Saccharum roſaceum.

Theſe flowers give out their virtue both to water and rectified ſpirit, and tinge the former of a fine red colour, but the latter of a very pale one: the extract obtained by inſpiſſating the watery infuſion, is moderately auſtere, bitteriſh, and ſubſaline; the ſpirituous extract is conſiderably ſtronger both in aſtringency and bitterneſs. In the ſhops, ſeven ounces of the dried roſe-buds are infuſed in five pounds of boiling water; and the infuſion made into a ſyrup with ſix pounds of fine ſugar †, or boiled to a ſyrupy conſiſtence with ſeven ‡ pounds of clarified honey: the ſyrup is valued chiefly for its gratefulneſs and fine red colour; the mixture with honey is uſed as a mild cooling detergent, particularly in gargariſms for inflammations and ulcerations of the mouth and tonſils. The infuſions acidulated with a little vitriolic acid, and ſweetened with ſugar, make a grateful, cooling, reſtringent julep, which is ſometimes directed in hectic caſes and hemorrhagies, and along with boluſes or electuaries of Peruvian bark, and ſometimes is uſed as a gargariſm: the college of London orders two pints and a half of

† Syrup. e roſis ficcis *Ph. Ed.* Mel. roſæ ‡ *Ph. Lond.*

Infuſ. roſæ *Ph. Lond.*

of boiling water, mixed with three drams of dilute vitriolic acid to be poured on half an ounce of the freſh buds, and an ounce and an half of fine ſugar to be diſſolved in the ſtrained infuſion: that of Edinburgh orders two pounds and a half of water, and half a dram of the acid, to half an ounce of the dry buds and an ounce of ſugar. Infuſum *vulgo* Tinct. roſarum *Ph. Ed.*

3. Cynosbatus *Pharm. Lond. Roſa ſilveſtris vulgaris flore odorato incarnato C. B. Roſa ſilveſtris inodora ſeu canina Park. Cynorrhodon. Roſa canina Linn.* Dog-roſe, wild briar, hipp-tree: with ſingle pentapetalous flowers, of a whitiſh colour mixed with various ſhades of red. It is one of the largeſt plants of the roſe kind; grows wild in hedges; and flowers, as the garden ſorts, in June.

The flowers of this ſpecies, of an agreeable but weak ſmell, and in taſte bitteriſh and roughiſh, are ſaid to have a greater degree of laxative virtue than thoſe of the damaſk roſe, together with a mild corroborating or reſtringent quality. The fruit, the only part of the dog-roſe made uſe of in medicine among us, is agreeably dulco-acid, and ſtands recommended as a cooling reſtringent, in bilious fluxes, ſharpneſs of urine, and hot indiſpoſitions of the ſtomach: the freſh pulp is made in the ſhops into a conſerve, by mixing three ounces of it with five of fine ſugar. The pulp ſhould be ſeparated with great care from the rough prickly matter which incloſes the ſeeds; a ſmall quantity of which, retained in the conſerve, is apt to occaſion an uneaſineſs at the ſtomach, pruritus about the anus, and ſometimes vomiting. Conſ. cynoſbati *Ph. Lond.*

ROSMARINUS.

ROSMARINUS Pharm. Lond. & Edinb. Roſmarinus hortenſis anguſtiore folio C. B. Libanotis coronaria quorundam. Roſmarinus officinalis Linn. ROSEMARY: a large ſhrubby plant, clothed with long narrow ſtiff leaves, ſet in pairs, of a dark green colour above and hoary underneath; producing pale bluiſh labiated flowers, which ſtand in cluſters round the ſtalk in the boſoms of the leaves. It is a native of the ſouthern parts of Europe, common in our gardens, and ſeems to grow larger and more woody in this than in moſt other countries. It flowers in April and May, and ſometimes again about the end of Auguſt.

ROSEMARY is a warm pungent aromatic; particularly uſeful in phlegmatic habits and debilities of the nervous ſyſtem; of the ſame general nature with lavender, but with more of a camphorated kind of pungency, and of a ſtronger, and to moſt people leſs grateful, ſmell. The tender tops are the ſtrongeſt both in ſmell and taſte, and next to theſe the cups of the flowers; which laſt, though ſomewhat weaker than the leaves or tops, are nevertheleſs the moſt pleaſant, and hence are generally preferred: it is chiefly, if not wholly, in the cup, that the active matter of the flower reſides; for the bluiſh petalum, carefully ſeparated, has very little ſmell or taſte. The fragrance of theſe flowers is greatly diminiſhed, or in great meaſure deſtroyed, by bruiſing or beating; and hence the officinal conſerve, formerly made by beating them with thrice their weight of ſugar, had very little of the flavour of the roſemary.

The

The leaves and tops of roſemary give out their virtues completely to rectified ſpirit, but only partially to water: the ſpirituous tinctures are of a yellowiſh green colour, the aqueous of a dark greeniſh brown. Diſtilled with water, they yield a thin, light, pale coloured eſſential oil, inclining a little to yellowiſh or greeniſh, of great fragrancy, though not quite ſo agreeable as the roſemary itſelf: from one hundred pounds of the herb in flower were obtained eight ounces of oil: the decoction, thus diveſted of the aromatic part of the plant, yields on being inſpiſſated an unpleaſant weakly bitteriſh extract. Rectified ſpirit likewiſe, diſtilled from roſemary leaves, becomes conſiderably impregnated with their fragrance, leaving however in the extract the greateſt ſhare both of their flavour and pungency. The active matter of the flowers is ſomewhat more volatile than that of the leaves, greateſt part of it ariſing with ſpirit. The Hungary water, uſed as a perfume, and ſometimes medicinally in nervous complaints, and which is ſaid to have received its name from its being firſt made public by an empreſs of that nation who was cured by its continued uſe of a paralytic diſorder, is a ſtrong ſpirit diſtilled from freſh roſemary flowers: the college of Edinburgh directs a gallon of rectified ſpirit to be drawn over in the heat of a water bath from two pounds of the flowers as ſoon as they are gathered†: that of London takes the tops, and a ſpirit not quite ſo ſtrong; putting a gallon of proof ſpirit to a pound and a half of the freſh tops, and drawing off in the heat of a water bath five pints‡. The hungary water brought from France is more fragrant than ſuch as is generally prepared among us.

Ol. roriſmar. eſſent. *Ph. Lond. & Ed.*

Sp. roriſmar. † *Ph. Ed.*

‡ *Ph. Lond.*

RUBIA.

RUBIA.

RUBIA Pharm. Lond. & Edinb. Rubia tinctorum ſativa C. B. Radix rubra, & erythrodanum quibuſdam. Rubia tinctorum Linn. MADDER: a rough procumbent plant, with ſquare jointed ſtalks, and five or ſix oblong pointed leaves ſet in form of a ſtar at every joint: on the tops come forth greeniſh yellow monopetalous flowers, deeply divided into four, five, or ſix ſegments, followed by two black berries: the root is long, ſlender, juicy, of a red colour both externally and internally; with a whitiſh woody pith in the middle. It is perennial, and cultivated in different parts of Europe (in ſome of which it is ſaid to be indigenous) for the uſe of the dyers: the roots have been brought to us chiefly from Zealand; but thoſe which have for ſome years paſt been raiſed in England, appear ſuperiour to the foreign, both as a colouring and a medicinal drug.

THE roots of madder have a bitteriſh, ſomewhat auſtere taſte, and a ſlight ſmell, not of the agreeable kind. They impart to water a dark red tincture, to rectified ſpirit and diſtilled oils a bright red: both the watery and ſpirituous tinctures taſte ſtrongly of the madder. The root taken internally tinges the urine and milk red; and in the Philoſophical Tranſactions, and the Memoirs of the French Academy of Sciences, there are accounts of its producing a like effect upon the bones of animals with whoſe food it had been mixed: all the bones, particularly the more ſolid ones, were changed both externally and internally to a deep red, though neither the fleſhy nor the cartilaginous parts

parts ſuffered any alteration. The bones, ſo tinged, gave out nothing of their colour either to water or ſpirit of wine.

This root appears therefore to be poſſeſſed of great ſubtility of parts, which may poſſibly render its medical virtues more conſiderable than they are now in general ſuppoſed to be. It has been chiefly recommended as a reſolvent and aperient, in obſtructions of the viſcera, particularly of the urinary organs, in coagulations of blood from falls or bruiſes, in jaundices, and in beginning dropſies. * It has lately come into reputation as an emmenagogue, and is ſaid to be a very efficacious medicine of this claſs *(a)*. From a ſcruple to half a dram of the powder, or two ounces of the decoction, may be given three or four times a day in this intention.

RUSCUS.

RUSCUS C. B. Ruſcus myrtifolius aculeatus Tourn. Bruſcus oxymyrſine, myrtacantha, myacantha & ſcopa regia quibuſdam. Ruſcus aculeatus Linn. BUTCHERS-BROOM or KNEEHOLLY: a low woody plant, with oblong ſtiff prickly leaves joined immediately to the ſtalks: from the middle ribs of the leaves, on the upper ſide, iſſue ſmall yellowiſh flowers ſucceeded by red berries: the root is pretty thick, knotty, furniſhed with long fibres matted together, of a pale browniſh colour on the outſide and white within. It grows wild in woods and on heaths, is perennial and evergreen, flowers in May, and ripens its berries in Auguſt.

(a) Home's *Clinical Caſes and Experiments.*

THE

The root of butchers-broom has a ſweetiſh taſte, mixed with a ſlight bitteriſhneſs. It ſtands recommended as an aperient and diuretic, in urinary obſtructions, nephritic caſes, dropſies, &c. Riverius tells us of an hydropic perſon who was completely cured by uſing a decoction of butchers-broom for his only drink, and taking two purges of ſena. The virtues of the root are extracted both by water and ſpirit, and on inſpiſſating the liquors, ſeem to remain entire behind: neither of the extracts is very ſtrong in taſte; the watery the leaſt ſo.

RUTA.

RUTA Pharm. Lond. & Edinb. Ruta hortenſis latifolia C. B. Ruta graveolens Linn. Rue: a ſmall ſhrubby plant, with thick bluiſh green leaves divided into numerous roundiſh ſegments: on the tops of the branches come forth yellowiſh tetrapetalous (ſometimes pentapetalous) flowers, followed each by a capſule, which is divided into four partitions full of ſmall blackiſh rough ſeeds. It is cultivated in gardens, flowers in June, and holds its leaves all the winter. The markets are frequently ſupplied with a narrow-leaved ſort, which is cultivated in preference to the other, on account of its appearing variegated during the winter with white ſtreaks.

This herb has a ſtrong unpleaſant ſmell, and a penetrating pungent bitteriſh taſte: much handled, it is apt to inflame and exulcerate the ſkin. It is recommended as a powerful ſtimulant, aperient, antiſeptic, and as poſſeſſing ſome degree of an antiſpaſmodic power; in crudities and indigeſtion, for preſerving againſt contagious

ous diſeaſes and the ill effects of corrupted air, in uterine obſtructions and hyſteric complaints, and externally in diſcutient and antiſeptic fomentations. Among the common people, the leaves are ſometimes taken with treacle, on an empty ſtomach, as an anthelmintic. A conſerve, made by beating the freſh leaves with thrice their weight of fine ſugar, is the moſt commodious form for the exhibition of the herb in ſubſtance.

The virtues of rue are extracted both by water and rectified ſpirit, moſt perfectly by the latter: the watery infuſions are of a greeniſh yellow or browniſh; the ſpirituous, made from the freſh leaves, of a deep green, from the dry of a dark yellowiſh brown colour: the leaves themſelves, in drying, change their bluiſh green colour to a yellow. On inſpiſſating the ſpirituous tincture, very little of its flavour riſes with the menſtruum; nearly all the active parts of the rue remaining concentrated in the extract, which impreſſes on the palate a very warm, ſubtile, durable pungency, and is in ſmell rather leſs unpleaſant than the herb in ſubſtance. In diſtillation with water, an eſſential oil ſeparates; in colour yellowiſh or browniſh, in taſte moderately acrid, and of a very penetrating ſmell rather more unpleaſant than that of the herb: a very conſiderable part of the virtue of the rue remains behind; the decoction, inſpiſſated, yielding, a moderately warm, pungent, bitteriſh extract. The active matter of this plant appears therefore to be chiefly of the more fixt kind: the eſſential oil itſelf is not very volatile, or at leaſt is ſo ſtrongly locked up by the other principles, as not to be readily elevated in diſtillation. The ſeeds and their capſules appear to contain more oil than

Extractum rutæ *Ph. Lond. & Ed.*

than the leaves: from twelve pounds of the leaves, gathered before the plant had flowered, only about three drams were obtained; whereas the ſame quantity of the herb with the ſeeds almoſt ripe yielded above an ounce.

SABINA.

SABINA Pharm. Lond. & Edinb. Sabina folio tamariſci dioſcoridis C. B. Savina quibuſdam. Juniperus Sabina Linn. SAVIN: an ever-green ſhrub or ſmall tree, clothed with very ſhort narrow leaves ſo ſtiff as to be prickly; producing ſmall imperfect flowers, and ſometimes, when grown old, bluiſh black berries like thoſe of juniper, of which the modern botany reckons it a ſpecies. It is a native of ſome of the ſouthern parts of Europe, and raiſed with us in gardens.

THE leaves and tops of ſavin have a moderately ſtrong ſmell, of the diſagreeable kind; and a hot, bitteriſh, acrid taſte. They give out great part of their active matter to watery liquors, and the whole to rectified ſpirit; tinging the former of a browniſh, and the latter of a dull dark green colour. Diſtilled with water, they yield a large quantity of eſſential oil: Hoffman ſays, that from thirty-two ounces he obtained full five ounces of oil, and obſerves that there is no other known vegetable ſubſtance, except ſome of the reſinous juices, as turpentine, that affords ſo much. The oil ſmells ſtrongly, and taſtes moderately of the ſavin: decoctions of the leaves, freed from this volatile principle by inſpiſſation to the conſiſtence of an extract, retain a conſiderable ſhare of their pungency and warmth along with their bitteriſhneſs, and have likewiſe ſome degree of ſmell,

Ol. eſſent. ſabinæ *Ph. Ed.*

Extractum ſabinæ *Ph. Lond.*

ſmell, but not reſembling that of the plant itſelf. On inſpiſſating the ſpirituous tincture, there remains an extract conſiſting of two diſtinct ſubſtances; one yellow, unctuous or oily, bitteriſh and very pungent; the other black, reſinous, tenacious, leſs pungent, and ſubaſtringent.

Savin is a warm ſtimulant and aperient; ſuppoſed particularly ſerviceable in uterine obſtructions, proceeding from a laxity or weakneſs of the veſſels, or a cold ſluggiſh indiſpoſition of the juices. The diſtilled oil is accounted one of the moſt potent emmenagogues: it is likewiſe a ſtrong diuretic, and, as Boerhaave obſerves, impregnates the urine with its ſmell. * The powdered leaves have been recommended as a very effectual eſcharotic for conſuming warty venereal excreſcences *(a)*.

SACCHARUM.

SUGAR: a ſweet ſubſtance, of a ſaline nature; prepared from the juice of an elegant large cane or reed, *arundo ſaccharifera C. B.* which grows ſpontaneouſly in the Eaſt Indies and ſome of the warmer parts of the Weſt, and is cultivated in large plantations in ſeveral of the American iſlands. The expreſſed juice of the cane is clarified with the addition of lime water, and boiled down to a ſomewhat thick conſiſtence: being then removed from the fire, the ſaccharine part concretes into brown coloured maſſes, *ſaccharum non purificatum Pharm. Lond.* leaving an unctuous liquid matter called melaſſes or treacle, from which a little more ſolid ſugar, but of a coarſer kind, is obtainable by a repetition of the boiling and clarification. The

(a) Med. Eſſ. Edinb. III. 395.

brown

brown ſugar is purified in conical moulds, by ſpreading, on the upper broad ſurface, ſome moiſt clay; whoſe watery moiſture, ſlowly percolating through the maſs, carries with it a conſiderable part of the remains of the treacly matter. The clayed ſugar, imported from America, is by our refiners diſſolved in water, the ſolution clarified with whites of eggs, and after due inſpiſſation, poured as before into conical moulds, where, as ſoon as the ſugar has concreted, and the fluid part is drained off by an aperture at the bottom, the ſurface of the loaf is again covered with moiſt clay. The ſugar, thus once refined, *ſaccharum album* becomes, by a repetition of the proceſs, the double-refined ſugar of the ſhops, *ſaccharum puriſſimum Pharm. Lond. & Edinb.* Solutions of the brown or white ſugars, boiled down till they begin to grow thick, and then removed into a very hot room, ſhoot, upon ſticks placed acroſs the veſſels for that purpoſe, into brown or white cryſtals or candy, *ſaccharum cryſtallinum*.

Sugar diſſolves by the aſſiſtance of heat, in rectified ſpirit; but greateſt part of it ſeparates again in the cold, and concretes into a cryſtalline form: on this foundation, ſaccharine concretions are obtained from ſaturated ſpirituous tinctures of ſeveral of the ſweet plants of our own growth; the ſaccharine part ſeparating when the tincture is ſet in the cold, while the reſinous or other matter extracted from the plant, remains diſſolved in the ſpirit. Solutions of ſugar mingle uniformly with thoſe of other ſaline ſubſtances, whether acid, alkaline, or neutral; and make no viſible alteration in the infuſions of the coloured flowers of vegetables, or other liquors,

liquors, in which acids or alkalies produce a change of colour or a precipitation. This ſweet ſaline ſubſtance appears on all trials completely neutral*(a); and unites with moſt kinds of humid bodies, without altering their native qualities: it ſerves as an intermedium for uniting together ſome bodies naturally repugnant, as diſtilled oils and water. On the ſame principle it impedes the coagulation of milk, and the ſeparation of its butyraceous part.

Sugar, in conſequence of this property, is ſuppoſed to unite the unctuous part of the food with the animal juices. Hence ſome have concluded, that it increaſes corpulence or fatneſs; others, that it has a contrary effect, by preventing the ſeparation of the oily matter, which forms fat, from the blood; and others, that it renders the juices thicker and more ſluggiſh, retards the circulation, obſtructs the natural ſecretions, and thus occaſions or aggravates ſcorbutic, cachectic, hypochondriacal and other diſorders. General experience, however, has not ſhewn, that ſugar produces any of theſe effects in any remarkable degree: its moderate uſe appears to be innocent; and perhaps, of all that have yet been diſcovered, it is the moſt univerſally innocent and inoffenſive, as well as the moſt ſimple, ſweet.

Sugar preſerves both animal and vegetable ſubſtances from putrefaction, and appears to poſſeſs this power in a higher degree than the common alimentary ſalt: I have ſeen animal fleſh preſerved by it untainted for upwards of three years. From this property it has been

*(a) An acid of a peculiar kind has been ſeparated from it in ſmall proportion and by a laborious proceſs, in which the nitrous acid is employed as the ſeparating medium.

ſometimes applied externally as a balſamic and antiſeptic.

The impure brown ſugars, by virtue of their oily or treacly matter, prove emollient and gently laxative. The cryſtals or candy are moſt difficult of ſolution, and hence are propereſt where this ſoft lubricating ſweet is wanted to diſſolve ſlowly in the mouth, as in tickling coughs and hoarſeneſs. The uſes of ſugar in medicinal compoſitions, whether for their preſervation, for procuring the intended form and conſiſtence, or for reconciling to the ſtomach and palate ſubſtances of themſelves diſguſtful, are too obvious to require being enlarged on.

SAGAPENUM.

SAGAPENUM Pharm. Lond. & Edinb. Serapinum quibuſdam. SAGAPENUM: the concrete gummy-reſinous juice of an oriental plant, of which we have no certain account, but which appears, from the ſeeds and pieces of ſtalks ſometimes found among the juice as brought to us, to be of the ferulaceous or umbelliferous kind. The ſagapenum comes immediately from Alexandria, either in diſtinct tears, or run together into large maſſes; outwardly of a yellow colour, internally ſomewhat paler and clear like horn; growing ſoft on being handled, ſo as to ſtick to the fingers. It is ſometimes ſupplied in the ſhops by the larger and darker coloured maſſes of bdellium broken in pieces; which greatly reſemble it in appearance, but may be diſtinguiſhed by their much weaker ſmell.

SAGAPENUM has a ſtrong diſagreeable ſmell, ſomewhat of the leek kind, or like that of a mixture

mixture of galbanum with a little aſafetida; and a moderately hot biting taſte. It is one of the ſtrongeſt of the deobſtruent gums, and frequently preſcribed, either by itſelf, or in conjunction with ammoniacum or galbanum, in hyſteric caſes, uterine obſtructions, aſthmas, and other diſorders. It may be commodiouſly taken in the form of pills, from two or three grains to a ſcruple or half a dram: in doſes of a dram, it looſens the belly.

On boiling this gummy-reſin in water, about three-fourths of it are reſolved into a turbid yellowiſh white liquor, which ſmells and taſtes weakly of the ſagapenum. Rectified ſpirit ſcarcely takes up above one half, and receives very little colour: the ſolution ſmells weakly, and taſtes pretty ſtrongly. Both the watery and ſpirituous ſolutions loſe much, in evaporation, of their taſte as well as their ſmell; the watery loſes moſt, the extract being very conſiderably weaker than the ſagapenum in ſubſtance. It is probable that the more active parts are carried off by the watery vapour, but that in the ſpirituous extract they are only inviſcated by the groſſer reſinous matter: for the water, collected by diſtillation, is notably impregnated with the flavour of the ſagapenum, and diſcovers likewiſe a ſmall portion of eſſential oil; whereas the diſtilled ſpirit is almoſt flavourleſs.

SALES ALKALINI.

ALKALIES, or ALKALINE SALTS: ſubſtances of a very pungent taſte; diſſoluble in cold water; changing the colours of the blue flowers of vegetables to a green; deſtroying the acidity of ſour liquors, and forming with the acid a neutral compound; precipitating earthy bodies

diſſolved in acids *(a)*; producing no precipitation or turbidneſs in ſolutions of the lixivial ſalts of vegetables. Theſe lixivial ſalts are themſelves alkalies: and to mingle uniformly with theſe bodies of their own kind, in a liquid ſtate, is the moſt commodious and ſure mark I can recollect, for diſtinguiſhing alkalies, univerſally, from certain ſolutions of earthy bodies in acids; ſome of which have, in a greater or leſs degree, all the common characters of alkalicity; but on being examined by this criterion, readily betray their compoſition, by rendering the limpid lixivial liquor milky, and depoſiting their earth; the acid, which before held the earth diſſolved, being abſorbed from it by the lixivial ſalt.

1. SAL ALKALINUS FIXUS. Fixt alkaline or lixivial ſalt: obtained from the aſhes of vegetables, by macerating or boiling them in water, and afterwards evaporating the lye till the ſalt remains dry. It is fixt and fuſible in the fire* *(b)*, deliquiates in a moiſt air, diſſolves in equal

(a) To this character of alkalicity there is one exception or limitation. Volatile alkaline ſpirits made completely cauſtic by quicklime, on being mixed with a ſolution of calcareous earth in the nitrous or marine acids, occaſion no precipitation or cloudineſs. If the mixture be expoſed for ſome time to the air, the alkaline ſpirit gradually loſes its cauſticity; and then precipitates the earth: on blowing into it air from the lungs, through a glaſs pipe, the precipitation began immediately.

* *(b)* If in fuſion a coal falls in, the alkali is reſolved into denſe white fumes, which act prodigiouſly on the brain and nervous ſyſtem, rendering the head weak and benumbed, as in convaleſcence from ſome great diſeaſe, occaſioning impatience and inquietude in every member. *Beaumé.*

its

its weight or leſs of water, and does not aſſume a cryſtalline form *(a)*.

Fixt alkaline ſalts have an acrid fiery taſte, and leave in the mouth a kind of urinous flavour. Saturated ſolutions of them in water corrode the ſolid parts of animals, diſſolve fats and oils into ſaponaceous compounds, and liquefy almoſt all the animal humours, except perhaps only milk, which, when heated, they coagulate. Diluted largely with water, and drank warm in bed, they generally excite ſweat: if that evacuation is not favoured by external warmth, they operate chiefly by urine, of which, in many caſes, as in maniacal and hydropic ones, they frequently procure a copious and ſalutary diſcharge: they likewiſe looſen the belly, and in coſtive habits, where the direct purgatives or laxatives give only temporary relief, they render the benefit more laſting. They ſeem in general to act by ſtimulating and deterging the ſolids, and reſolving the viſcidities of the humours; and by theſe means opening obſtructions, or promoting ſecretion, in all the organs through which they paſs. The doſe is from two or three grains to fifteen or twenty; in ſome caſes it has been extended to a dram. That they may be given, and continued for ſome time, with ſafety, in very conſiderable doſes, appears from the experience of thoſe, who have taken the ſtrong ſolution of them called ſoap-lyes for the relief of calculous complaints.

(a) Though theſe ſalts, as commonly prepared, are never found to ſhoot into cryſtals, they do cryſtallize in part when ſolutions of them have been expoſed for a length of time to the open air. The cryſtals are far milder in taſte, and effervesce more ſtrongly with acids, than the alkali in its common ſtate.

In putrid diſorders, and a colliquated ſtate of the humours, theſe ſalts have been generally, and I think juſtly, condemned: for though they have lately been diſcovered to reſiſt putrefaction both in the fluids and ſolids of dead animals, yet in living ones they apparently increaſe the colliquation, with which all putrid diſeaſes are accompanied.

Fixt alkaline ſalts are obtainable, in greater or leſs quantity, from almoſt all vegetables; excepting perhaps only a few of the volatile acrid kind, as muſtard ſeed. The ſalts of different plants, in the ſtate wherein they are firſt extracted from the aſhes, are found to differ in degree of ſtrength, and in ſome other reſpects, from one another; many of them containing a portion, and ſome a very conſiderable one, of neutral ſalts of the vitriolic or marine kind *(a)*. Purified by calcination, ſo as that all remains of the oil of the vegetable may be burnt out; and by deliquiation

(a) The readieſt way of diſcovering neutral ſalt in the lixivial ſalts of vegetables is, by ſhaking a ſtrong ſolution of them in a vial with about an equal quantity of rectified ſpirit of wine. If the ſalt is purely alkaline, the two liquors, on ſtanding for a moment, will ſeparate from one another; the ſpirit riſing to the top, and the alkaline ſolution collecting itſelf at the bottom, both of them tranſparent as at firſt. If neutral ſalts are mixed with the alkali, though in very ſmall proportion, the ſpirit produces inſtantly an opake milkineſs in the lye; and on ſtanding for a few minutes, a ſaline matter ſeparates and falls to the bottom, in greater or leſs quantity, according as the alkali has a greater or leſs admixture of the neutral ſalt.

The exact quantity of pure alkali in any kind of lixivial ſalt or potaſh may be determined by means of acids. Some alkaline ſalt known to be pure, as good ſalt of tartar, is to be melted in an iron ladle, that all remains of watery moiſture may be expelled: a certain quantity of this ſalt, as a dram, weighed out while warm, is to be diſſolved in a little

deliquiation in the air, by which only the alkali diſſolves; they are all, except thoſe of ſome marine plants (ſee *Natron*), ſo much alike, as not to be diſtinguiſhable, by any known method of trial, from one another.

The ſalts of the leaves and other herbaceous parts of plants are more difficultly brought to a ſtate of perfect purity than thoſe of the more woody and compact; a portion of oily matter being tenaciouſly retained, minute indeed, yet ſufficient to give a browniſh tinge. A ſalt of this kind is generally prepared, or expected to be prepared from wormwood, ſometimes from broom, and ſometimes from bean ſtalks, all which are ſufficiently well adapted to this uſe, their aſhes yielding as large a proportion as moſt of the common herbaceous matters, and their ſalt ſeeming to be almoſt merely alkaline, or free from any conſiderable quantity of the other kinds of ſaline matter, of which the aſhes of ſome vegetables contain more than they do of alkaline ſalt. About London, the ſhops are uſually ſupplied from the country with the aſhes of wormwood ready burnt; but that more of the oil may be conſumed than the ſimple burning Sal abſinth.

little water, and ſaturated with any convenient acid, as diluted ſpirit of ſalt: the point of ſaturation is readily and accurately obtained by means of ſtained paper, as directed in page 19. For the greater facility in trials of this kind, a quantity of the ſpirit of ſalt may be ſo diluted, that ſixteen drams of it for inſtance may exactly ſaturate the one dram of pure alkali. If then a ſolution of one dram of any given ſalt be ſaturated with the ſame acid liquor, ſo many drams or parts of a dram of the acid as are required for the ſaturation, ſo many ſixteenths or parts of ſixteenths of pure alkali does the given ſalt contain. This appears to be the moſt ſimple and commodious, as well as the moſt accurate way, that has yet been contrived, for determining the alkalicity, or degree of purity, of all kinds of lixivial ſalts.

of the herb has diſſipated, they are further calcined with a red heat, and occaſionally ſtirred, for ſome hours: the white aſhes are then boiled in water, and the filtered lye evaporated to dryneſs.

Some have endeavoured to retain in the ſalt as much as poſſible of the oil, by burning the plant with a cloſe ſmothering heat, continued no longer than till it is reduced fully to aſhes: that is, till the alkaline ſalt is generated, for theſe ſalts do not appear to exiſt naturally in vegetables. The alkalies thus prepared are of a dark brown colour, and ſuppoſed to be much milder and leſs acrimonious, and more of a ſaponaceous nature, than thoſe which have been farther diveſted of oil. But as we now have, in the ſoda or natron, an alkali as mild as can be wiſhed for, this inelegant, precarious and unfrugal method of ſuppreſſing the acrimony of the common alkalies, becomes unneceſſary.

Among all the known vegetables, or vegetable productions, there are none from which a pure alkaline ſalt is obtainable ſo eaſily, and in ſo large a quantity, as from tartar. If red or white tartar be burnt with a moderately ſtrong fire, either in a proper veſſel, or wrapped up in wetted brown paper, to prevent the ſmaller pieces from dropping down through the interſtices of the coals on being firſt injected into the furnace, it ſoon turns to white aſhes, which yield on the firſt elixation a ſtrong fiery ſalt†, of a ſnowy whiteneſs, amounting to about one fourth the weight of the tartar. The ſtrength of the ſalt is ſomewhat further increaſed, by keeping it melted for ſome hours in an intenſe fire; in which operation, if the crucible cracks or is left uncovered, ſo as that the flame may have any acceſs to the ſalt, or if a minute portion

† Sal tartari *Pb. Ed.*

tion of any inflammable matter is introduced, it assumes, in part at least, a greenish or blue colour, which is commonly looked upon as a mark of its strength.—A pure and strong alkaline solution is obtained, by exposing to the air, in a moist place, either the salt, or the white ashes‡ of tartar: the alkali imbibes in a few days so much of the aereal moisture, as to run wholly into a liquor, leaving, how highly soever the salt has been purified before, a considerable quantity of earthy matter. If the liquor be inspissated to dryness, and the dry salt again deliquiated in the air or dissolved in pure water, an earthy matter is still left: and even if the filtered solution be kept for a length of time in a close stopt glass vessel, an earthy substance gradually separates and falls to the bottom.

‡ Lixivium tartari.

Alkaline salts are prepared for common uses, in the way of trade, chiefly from wood; of which, in the forests of Germany, Russia, and Sweden, large piles are burnt on purpose. To save the trouble of boiling down the lye, the finer part of the ashes unelixated is in some places tempered with it into the consistence of mortar, which is afterwards stratified with some of the more inflammable kinds of wood, and burnt a second time: in others, the lye is soaked up in dry straw, and this drained and burnt. The impure saline masses, obtained by these or similar methods, are called *Potashes*; the strongest of which has been generally reckoned that brought from Russia *(Cineres russici)* in dark-coloured hard masses, of a very pungent taste, yet containing so much earthy matter as not readily to liquefy or grow moist in the air. This potash is said to be prepared in the first of the ways above-mentioned: but it appears from some late experiments, that another ingredient

gredient is made uſe of in the proceſs; the maſſes, as brought to us, being found to contain more quicklime than alkaline ſalt *(a)*, and on this depends the great ſtrength and corroſiveneſs of the Ruſſian potaſh. For a purer ſalt, the lye is boiled down in large iron veſſels; and the dark-coloured dry ſalt, which concretes into a hard cruſt on the ſides and bottom of the veſſel, is beaten off with a mallet and chiſel, and calcined in an oven, with a gradual fire, till it becomes white; in which ſtate it is called, from its pearly appearance, *pearl-aſh*. For ſome years paſt, we have been ſupplied chiefly from our American colonies, with compact alkaline maſſes, much more pure that the above *pot-aſhes*, though leſs ſo than the *pearl-aſh*; prepared by boiling down the lye to dryneſs, and then increaſing the fire till

(a) See Dr. Home's *Experiments on bleaching*. — It has been ſuſpected that the matter in Ruſſia potaſh, which ſeemed from Dr. Home's experiments to be quicklime, is no other than the earth of the vegetable aſhes themſelves, which earth, by ſtrong calcination, ſuch as this kind of potaſh is ſaid to undergo, aſſumes ſome of the moſt ſtriking characters of true quicklime. Since the eſtabliſhment of the American manufacture, the Ruſſia ſort has in this country fallen ſo much into diſuſe, that it is very difficult to procure a ſpecimen that can be depended on as genuine. What has been ſent to me as true Ruſſia potaſh (and which indeed has greatly the appearance of what uſed to be ſold under that name) on being elixated with water, leaves a large quantity of earthy matter, greateſt part of which diſſolves readily in aquafortis. This ſolution has exactly the ſame taſte with a ſolution of chalk made in the ſame acid: on dropping into it a little vitriolic acid, the liquor grows inſtantly milky, and a copious precipitation enſues. This precipitability by the vitriolic acid is one of the properties of calcareous earths, which the earth of vegetables has not been found to acquire by any degree of calcination; and therefore we may conclude that in the making of this potaſh real quicklime is mixed, in very large proportion.

the

the ſalt becomes red-hot, and melts, ſo as to be conveniently laded out with iron ladles: the troubleſome operation of getting off the indurated ſalt from the boiler is thus avoided; and the ſtrong melting heat, though of ſhort continuance, ſupplies in great meaſure the tedious calcination of the ſalt; for though the inflammable matter, on which the colour depends, is in fuſion not conſumed, it is burnt to an indiſſoluble coaly ſtate, ſo that lyes made from theſe melted potaſhes with water are nearly as colourleſs as thoſe of the whiteſt pearl-aſhes. * The college of Edinburgh, which has diſcarded the oily alkalies of wormwood, broom, &c. now directs a pure incinerated alkali to be made from pearl-aſhes, firſt burned with a red heat in a crucible, then diſſolved in water, cleared by ſubſidence, and evaporated to dryneſs in an iron pot. This ſalt will diſſolve in equal its weight in water, and the ſolution is analogous to the former *oleum tartari per deliquium*. The London college, in their laſt pharmacopœia, have given the ſpecific apellation of *kali* to the fixed vegetable alkali, in all its varieties; and they order it to be got pure from pearl-aſhes, or any other vegetable aſhes, by lixiviation in water, colature, evaporation to a pellicle, ſeparation of the neutral ſalts which will then cryſtallize, and laſtly, evaporation to dryneſs. It is alſo allowed to be ſimilarly prepared from burned tartar. For a liquid preparation, this pure ſalt is ſet apart in a moiſt place till it ſpontaneouſly deliqueſces.

Sal alkalinus fixus vegetabilis purificatus *Ph. Ed.*

Kali præpar. *Ph. Lond.*

Quicklime remarkably increaſes the activity of all theſe ſalts; enabling them, in a liquid or dilute form, to diſſolve oils, fats, &c. far more powerfully than either the lime or alkali by themſelves; and in a ſolid or more concentrated one,

Aqua kali *Ph. Lond.*

Aqua kali *Ph. Lond.*

one, to act as caustics. For these purposes, the London college directs four pints of water to be poured to six pounds of quicklime, which are to stand together for an hour: then as much more water as will make the whole four gallons, with four pounds of alkaline salt, are to be added, and the whole boiled for a quarter of an hour, when it is to be suffered to cool, and strained off. The liquor is known by the name of soap lye, and ought to be of such a strength, that an exact wine pint may weigh just sixteen ounces troy. If it excites any fermentation with acids, more quicklime is to be added. The common lyes of our soft-soap makers are considerably stronger than this: Dr. Pemberton observes, that their lyes will be reduced to the strength here proposed, by diluting them with somewhat less than an equal measure of water.

Lixivium causticum *Ph. Ed.*

* In the Edinburgh pharmacopœia this preparation is thus directed. Eight ounces of fresh quicklime are put into an iron or earthen vessel with twenty-eight ounces of warm water. When the ebullition is over, six ounces of pure vegetable fixt alkali are added, and after perfect mixture, the vessel is covered and suffered to cool. The matter is then poured into a glass funnel, lined with a linen rag, and is set to drain into a glass bottle as long as any liquor will run. Some more water is then to be poured to the matter in the funnel, which will drain through it; and this is to be repeated till three pounds of liquor are procured, which is to be shaken together, and kept in a well stopped phial. *(a)*

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(a) Pure alkaline salt requires commonly about twice its weight of quicklime to render it completely caustic. Complete causticity is known by the lye making no effervescence

The dry ſalt obtained by evaporating theſe lyes is a ſtrong and ſudden cauſtic: for the greater convenience of uſing, it is urged in a crucible with a ſtrong fire, till it flows like oil, then poured upon a flat plate made hot, and whilſt the matter continues ſoft, cut into pieces of a proper ſize and figure, which are kept in a glaſs veſſel cloſely ſtopt. It deliquiates much ſooner in the air, and diſſolves more readily in watery liquors, than the milder alkalies, and in this conſiſts its principal inconvenience; being apt to liquefy ſo much upon the part to which it is applied, as to ſpread beyond the limits in which it is intended to operate. This inconvenience is avoided, by boiling down the ſoap lye only to one third† or fourth‡ part, and then, while the liquor continues boiling, ſprinkling in, by little and little, ſo much powdered quicklime as will abſorb it ſo as to form a kind of paſte†: or, more accurately, in the proportion of five pounds four ounces, to ſixteen pints of the original lye‡: the addition of the lime in ſubſtance renders the preparation leſs apt to liquefy, and hence more eaſily confinable within the intended limits, but at the ſame time proportionably more ſlow in its operation.

Kali purum *Ph. Lond.*

Cauſticum commune acerrimum *Ph. Ed.*

† Cauſticum commune mitius *Ph. Ed.*

‡ Calx cum kali puro *Ph. Lond.*

2. Sal alkalinus volatilis. Volatile alkaline ſalt: obtainable, by diſtillation with a ſtrong fire, from all animal matters, from ſoot, and in ſmall quantity from moſt vegetables: producible alſo in animal ſubſtances, very plentifully in urine, by putrefaction, and in this

veſcence with acids. A redundance of lime is known, by the lye growing milky on dropping into it a little common alkaline lye, or on blowing into it with the breath through a glaſs pipe.

caſe

caſe ſeparable by diſtillation with a gentle heat. When the ſalt is once formed, whether by ignition or putrefaction, it gradually exhales in moderately warm air; and riſes ſooner in diſtillation than highly-rectified vinous ſpirits, condenſing about the ſides of the recipient into cryſtalline concretions. It requires for its ſolution three or four times its weight of water.

Theſe ſalts are in ſmell as well as taſte very penetrating and pungent: they are the only concrete ſalts that in their pure ſtate emit ſenſible effluvia. They diſſolve oils, reſins, fats, &c. more languidly than the fixt alkalies, on account perhaps of their not being ſuſceptible of any conſiderable heat, by which their menſtrual power might be promoted. In the bodies of animals, they operate more powerfully than the fixt, both as reſolvents and ſtimulants; are more diſpoſed to direct their force to the cutaneous pores, and leſs to the groſſer emunctories; and act more remarkably upon the nervous ſyſtem. They are particularly uſeful in lethargic and apoplectic caſes; in hyſterical and hypochondriacal diſorders, and the languors, head-achs, inflations of the ſtomach, flatulent colics, and other ſymptoms attending thoſe diſtempers, eſpecially in aged perſons and thoſe of a phlegmatic habit: in languors and faintings, their ſtimulating ſmell gives oftentimes immediate relief. In ſome kinds of fevers, particularly thoſe of the low kind, accompanied with a cough, hoarſeneſs, redundance of phlegm, and lentor of the blood, they are of great utility; liquefying the thick juices, raiſing the pulſe, and exciting a ſalutary diaphoreſis. In putrid fevers, ſcurvies, and wherever the maſs of blood is thin and acrimonious, they are hurtful: for though they powerfully reſiſt the putrefaction

putrefaction of animal ſubſtances, that are detached from the vital œconomy, yet, in living animals, one of their primary effects is a colliquation of the humours, which in its advanced ſtate is very nearly allied to the advanced ſtate of putrefactive colliquation: their immoderate uſe has brought on high ſcorbutic ſymptoms, reſembling thoſe of the true putrid ſcurvy *(a)*. Theſe ſalts are moſt commodiouſly taken in a liquid form, largely diluted; or in that of a bolus, which ſhould be made up only as wanted, the ſalt ſoon flying off. The doſe is from two or three grains to ten, twelve, or more.

The volatile alkalies obtained from different ſubſtances appear, like the fixt, to be, in their ſtate of perfect purity, one and the ſame thing. But as firſt diſtilled from the ſubject, they are largely impregnated with its oil rendered fetid or empyreumatic by the proceſs in which the ſalt was generated; and as theſe oils differ from one another in degree of ſubtility and fetidneſs, the ſalts partake of the ſame differences, till repeated diſtillations or other proceſſes have either ſeparated the adhering oils, or ſubtilized and purified them to the ſame degree. By repeated diſtillations, all animal oils become limpid as water, loſe their fetor, acquire a penetrating fragrant ſmell, and a gratefully pungent taſte: thus rectified, they are ſaid, by Dippelius, Hoffman, and others, to act, in doſes of half a drop, as diaphoretics, anodynes, and antiſpaſmodics. The volatile alkalies uſed in medicine are expected to be either pure from oil, or to have their oil in this ſubtilized ſtate. Oleum animale *vulgo*.

The oily volatile alkalies have been chiefly prepared from hartſhorn, by diſtillation in large

(a) See Huxham's *Diſſertation on the malignant ſore throat.*

iron

iron pots, with a fire increaſed by degrees to a ſtrong red heat. At firſt there ariſes an aqueous liquor, then the volatile ſalt, along with a yellowiſh and at length a dark reddiſh oil: if the aqueous liquor is not removed before the ſalt begins to come over, a part of the ſalt diſſolves in it, and thus forms what is called ſpirit.

The oil, excepting ſo much of it as is incorporated with the alkali, may be ſeparated from the ſpirit by filtration through wetted paper, which tranſmits the ſpirit and retains the oil. The ſalt and ſpirit are then diſtilled again together, with a very gentle heat, in a glaſs retort; and the diſtillation carefully repeated ſeveral times, till the ſalt becomes exceedingly white, and the ſpirit limpid as water, and of a grateful ſmell. The ſalt becomes the ſooner pure, if it be ſeparated from the ſpirit, and ſublimed firſt from an equal weight of pure chalk and afterwards from a little rectified ſpirit of wine. If the whole of the volatile ſalt is required in a ſolid form, it may be recovered from the ſpirit by ſublimation in a tall narrow cucurbit, the ſalt riſing into the head, while the watery fluid remains behind. In all the diſtillations of the ſpirit, greateſt part of the ſalt comes over before the phlegm; and the proceſs ſhould be continued no longer than till ſo much of the phlegm has followed as is nearly ſufficient to diſſolve it; that a part of the ſalt remaining undiſſolved may be a criterion, to the purchaſer, of the ſaturation or ſtrength of the ſpirit.—A ſpirit, ſalt, and oil, are ſometimes diſtilled in the ſame manner from wood ſoot, but here more labour is required to render the ſalt and ſpirit pure.

Liquor volatilis, ſal, & oleum cornu cervi *Ph. Lond.*

Though

Though the whiteneſs and limpidity which the ſalts and ſpirits of hartſhorn, ſoot, and other like ſubſtances, acquire by the above methods of purification, ſeem to ſhew that they are diveſted of oil; they are nevertheleſs found to participate ſtill of that principle in no ſmall degree. In long keeping they contract a yellow colour, and at length become again nauſeous and fœtid; the oil ſeeming to be more and more extricated, or to loſe by degrees of the ſubtility and grateſulneſs which it received from the rectification. The oftener the diſtillation is repeated, the more permanent is the ſubtilization of the oil.

The moſt effectual purification of theſe ſalts is obtained, by combining them with mineral acids, and afterwards ſeparating the acid. It is not needful to make ſuch a combination on purpoſe: for ſuch a one is produced more compendiouſly, in the way of trade, and called in the ſhops ſal ammoniac: ſee the following article.

If ſal ammoniac be mingled with any fixt alkaline ſalt, either in the form of powder or ſolution, its acid will be abſorbed by the fixt alkali; and the volatile alkali, thus ſet at liberty again, will immediately diſcover itſelf by its pungent odour, and may be collected perfectly pure by diſtillation. Eighteen ounces of fixt alkali, and one pound of ſal ammoniac, may be diſtilled with four pints of water in a gentle heat, till two pints are drawn off†: or ſixteen ounces each of the two ſalts may be diſtilled with two pounds of water, to dryneſs‡. The volatile alkaline ſalt may be extricated likewiſe by means of chalk, but with this difference, that the chalk does not begin to act upon the ſal ammoniac, or abſorb its acid, till the mixture is conſiderably heated: one part of the ſal

Aqua ammoniæ *Ph. Lond.* Spirit. ſal. ammoniac.

† *Ph. Ed.*

Ammonia præp. *Ph. Lond.* ammoniac may be mixed with two of chalk, and the mixture ſet to ſublime in a retort with a ſtrong fire.

Alcali volatile ex ſale ammon. *vulgo* ſal ammon. volat. *Ph. Ed.* Quicklime, which heightens the pungency of fixt alkalies even to cauſticity, has a like effect upon the volatile: it renders the fixt more eaſily liquefiable, and the volatile permanently liquid, preventing their concretion into a ſolid form: the volatile alkali, like the fixt, in having its activity thus increaſed by quicklime, loſes its power of efferveſcing with acids; from whence it may be preſumed, that the lime acts, on one alkali as on the other, by abſorbing their air (ſee page 255). This pungent volatile ſpirit may be prepared, by ſlaking two pounds of quicklime in two pints of water, letting it ſtand an hour, and then adding a pound of powdered ſal ammoniac with ſix pints of warm water: immediately adapt a recipient, (for the pungent vapours begin to ariſe on the firſt contact) and with a gentle heat draw off one pint. *Or two pounds of quicklime may be ſlaked with one pound of water, and covered till it falls to a powder, which is then to be put in a retort with ſixteen ounces of ſal ammoniac diſſolved in four times its weight of water. The veſſels are to be very carefully luted, and with a very gentle heat twenty ounces are to be drawn off. This ſpirit is held too acrimonious for internal uſe, and has therefore been chiefly employed in ſmelling-bottles. It is an excellent menſtruum for certain vegetable ſubſtances, as Peruvian bark, which the milder ſpirits extract little from; and when ſaturated with bodies of this kind, its pungency is ſo far ſheathed, that it may be taken inwardly with as great ſafety as tinctures made in the other ſpirits. In long keeping, unleſs the bottle is quite full

Aqua ammoniæ puræ *Ph. Lond.*

Alcali volat. cauſt. *Ph. Ed.*

full and very closely secured, it gradually imbibes air, as appears from the effervescence which it raises with acids; and loses proportionably of its pungency.

Some have mixed a quantity of this caustic spirit with the officinal spirits both of sal ammoniac and of hartshorn; which thus become more pungent, so as to bear an addition of a considerable proportion of water without danger of discovery from the taste or smell. This abuse may be detected, by adding to the suspected spirit a quantity of spirit of wine; which, if the volatile spirit is genuine, will precipitate a part of its volatile salt, but has no such effect either on the caustic spirit itself, or on such as is sophisticated with it.

Some have substituted to the spirit a solution of sal ammoniac and fixt alkaline salt: this liquor eludes the above method of trial, as it deposites a saline matter on the addition of spirit of wine, in the same manner as the genuine volatile spirit: it may be distinguished by the matter, thus deposited, being not volatile but fixt; or by a fixt salt being left upon evaporating a little of the liquor; or more compendiously, by adding a drop or two of solution of silver made in aquafortis, which immediately produces a milkiness in the counterfeit, but makes no apparent change in the genuine spirit.

The addition of spirit of wine to volatile alkaline spirit affords means of judging, in some degree, of their strength or saturation as well as of their purity. If the volatile spirit be fully saturated with salt, a quantity of highly-rectified spirit of wine, poured on it slowly down the sides of the glass, in a cool place, produces immediately an opake dense coagulum on the surface where the liquors touch: on shaking

them together, the whole becomes a consistent mass, which soon resolves by warmth into a fluid and a solid part. This is supposed by some to be a volatile soap, composed of the alkaline salt of the one spirit and the oily principle of the other; though in effect it is no more than the alkaline salt itself dislodged, by the vinous spirit from the watery fluid in which it was dissolved: the quantity of salt, thus separated, will be in proportion to the strength of the volatile spirit.

Offa alba Helmontii.

Though volatile alkalies, not caustic, appear from the above experiments to be averse to any union with vinous spirits; a solution of them even in rectified spirit is nevertheless obtainable, by adding it, along with water, in the process by which they are extricated from the sal ammoniac. For this purpose, three pints of proof spirit are put to four ounces of sal ammoniac, and six (or less) of any fixt alkaline salt, and one half of the liquor drawn off with a gentle heat†. Or sixteen ounces of quicklime and eight of sal ammoniac are powdered together, and put into a retort with thirty-two ounces of rectified spirit, and the distillation continued till all the spirit is come over‡. This preparation has lately come into esteem both as a medicine and a menstruum.

† Spirit. ammoniæ *Ph. Lond.*

‡ Spiritus sal. ammon. vinosus *Ph. Ed.*

Mixtures of volatile and vinous spirits, flavoured with different aromatic oils, and other like materials, have long been in general use under the name of *sal-volatile*. The college of London orders a quart of the above dulcified spirit, two drams of essential oil of nutmegs, and the same quantity of essence of lemons, to be mixed together: that of Edinburgh directs a dram and a half of oil of rosemary, and a dram of essence of lemons, to be dissolved in eight ounces of the dulcified spirit. Volatile spirits are impregnated

Spir. ammoniæ comp. *Ph. Lond.*

Spirit. volat. aromat. *vulgo* Spir. volat. oleos. & Spir. salinus aromat. *Ph. Ed.*

ted alſo in the ſhops with aſafetida, in the proportion of four ounces to five pints†, or one ounce to ſixteen ounces‡.

Spir. ammon. fœtid.
† *Ph. Lond.*
‡ — volat. fœt. *Ph. Ed.*

Theſe kinds of compoſitions may be made extemporaneouſly, by dropping any proper eſſential oils into the dulcified ſpirit of ſal ammoniac, (as now directed above by the London and Edinburgh colleges) which will readily diſſolve them without the aſſiſtance of diſtillation. By this method, a ſal-volatile may be occaſionally prepared, of any particular flavour, or adapted to particular purpoſes: thus, in hyſterical diſorders, where the uterine purgations are deficient, a preparation of this kind, made with the oils of rue or ſavin, proves an uſeful remedy: in weakneſs of the ſtomach, oil of mint may be uſed; and in flatulent caſes, thoſe of aniſeeds or ſweet fennel ſeeds: theſe laſt remarkably cover the pungency of the volatile ſpirit, and render it ſupportable to the palate. The doſe of theſe compounds is from a few drops to ſixty or more.

The cauſtic ſpirit made with quicklime appears in ſome caſes preferable, for theſe kinds of compoſitions, to the other volatile ſpirits; as being perfectly miſcible with rectified ſpirit of wine, in any proportions, without any ſeparation of its volatile alkaline part; and as being a more powerful menſtruum for ſome difficultly ſoluble oils. The very penetrating pungent volatile ſpirit, which has lately come into vogue under the name of *eau de luce*, is ſaid to be made with this cauſtic ſpirit, and oil of amber that has been rectified or rediſtilled till it becomes limpid and loſes its ſmell: one ſcruple of the oil, ſo rectified, and ten grains of ſoap, are directed to be diſſolved in an ounce of rectified ſpirit of wine, and four ounces of the cauſtic

Spir. ammoniæ ſuccinat. *Ph. Lond.*

ſpirit added gradually to this ſolution: the mixture generally appears milky, and if required limpid may be rendered ſo by diſtillation: ſome tinge it of a fine blue colour, when deſigned only for ſmelling to, by adding a drop or two of ſolution of copper(*a*).

SAL AMMONIACUS.

SAL AMMONIACUS Pharm. Lond. & Edinb. SAL AMMONIAC: a neutral ſalt; volatile in a moderate heat, but not in that of boiling water; formed by the coalition of volatile alkaline ſalt with marine acid. On mixing it with a fixt alkaline ſalt or calcareous earth, and expoſing the mixture to the fire, its ingredients are diſunited: the volatile alkali exhales, and may be collected in proper veſſels (ſee the foregoing article): and the acid remains combined with the fixt alkali or earth, forming therewith the ſame compounds as if the pure marine acid had been poured upon them. Hence, in the preceding operations, where the volatile alkali of the ſal ammoniac is ſeparated by the intervention of fixt alkalies, the reſiduum, diſſolved and cryſtallized, is found to be the ſame with *regenerated ſea ſalt*; and when chalk or lime is uſed for the intermedium, the reſiduum affords *calcareous marine ſalt*: ſee *Sal communis*.

The other mineral acids form likewiſe ammoniacal ſalts with volatile alkali; and it is ſaid, that one made with the vitriolic acid is often ſubſtituted to the true officinal one with the marine.—The moſt obvious character of ammoniacal ſalts in general is, their yielding a pungent urinous odour on being ground with a

(*a*) Malouin, *Chimie medicinale*, i. 202. ii. 431.

little

little quicklime. The *marine* ſal ammoniac may be diſtinguiſhed from thoſe made with the other acids, by its emitting white fumes on dropping upon it ſome oil of vitriol; and by a ſolution of it in purified aquafortis being able to diſſolve gold leaf or a mark made with gold on a touchſtone. The *nitrous* ſal ammoniac is diſtinguiſhed, by its deflagrating or flaming when thrown into a red-hot veſſel, diſſolving in ſpirit of wine, and yielding red fumes with oil of vitriol. The *vitriolic* is diſtinguiſhed by a ſolution of it rendering ſolution of chalk in aquafortis milky; and by its not being acted upon by oil of vitriol.

SAL AMMONIAC has been hitherto prepared chiefly in Egypt: it is ſaid, that the earth abounds there with marine ſalt; that graſs and other vegetables are ſenſibly impregnated with this ſalt; that the dung of graminivorous quadrupeds is uſed as fuel, and the ſoot carefully collected; and that from this ſoot, ſal ammoniac is extracted, by ſublimation without addition. The ſalt is brought to us, ſometimes in conical loaves, moſt commonly in large round cakes, convex on one ſide and concave on the other, appearing when broken of a needled texture, or compoſed of ſtriæ running tranſverſely and parallel to one another: the internal part is generally pure, and of an almoſt tranſparent whiteneſs; the outſide for the moſt part foul and of a yellowiſh grey or blackiſh hue. It is purified, either by ſublimation, with a gradual fire, in an earthen cucurbit having a blindhead adapted to it; or, perhaps more perfectly, by ſolution in water, filtration, and cryſtallization. It diſſolves, in temperately warm weather, in about thrice its weight of

water, and by the assistance of heat in a much smaller quantity; and crystallizes into long shining spicula, or thin fibrous plates like feathers. In sublimation, especially if the fire is hastily raised, it remarkably volatilizes many kinds of bodies, perhaps all those that are soluble by the marine acid.

This salt has a very sharp penetrating taste. It is a powerful attenuant and deobstruent, seeming to liquefy the animal juices almost like alkaline salts: Boerhaave observes that its liberal and continued use renders the blood so thin as to burst through the vessels, particularly those of the lungs and the urinary organs. In doses of half a dram or a dram, dissolved in water, if the patient is kept warm, it generally proves sudorific: by moderate exercise, or walking in the open air, its action is determined to the kidneys: in larger doses it loosens the belly. It has by some been held a secret for the cure of intermittents; and is undoubtedly, in many cases, as an aperient, an excellent assistant to the Peruvian bark, where that astringent drug by itself would produce dangerous obstructions, or aggravate those already formed. This salt is employed likewise externally as an antiseptic, and in lotions and fomentations for œdematous tumours; as also in gargarisms, for inflammations of the tonsils, and for attenuating and dissolving thick mucus in the mouth and fauces. Saturated solutions of it are said to consume warts.

SAL CATHARTICUS.

PURGING SALT: a salt of a bitter taste; soluble in twice its weight or less of water, and shooting into long prismatic crystals like those of

of nitre; liquefying and bubbling up in a moderate heat, emitting a large quantity of aqueous vapours, and changing to a white ſpongy maſs, bitterer than the ſalt at firſt. It is of two kinds; one a combination of the vitriolic acid with the earth called *magneſia*; the other, a combination of the ſame acid with the fixt alkali called *natron*. The moſt obvious criterion of their acid being the vitriolic is, their precipitating chalk diſſolved in aquafortis or in other acids.

1. SAL AMARUS *Pharm. Lond. Sal cathartic. amarus Pharm. Edinb. Nitrum calcareum Liſtero & hydrologis quibuſdam.* Purging bitter ſalt: compoſed of the vitriolic acid and magneſia; diſtinguiſhable from that whoſe baſis is an alkali, by ſolutions of it being turned milky, and depoſiting their earth, on the addition of any alkaline ſalt.

This is the ſalt with which the purging mineral waters are principally impregnated, and on which their purgative quality depends. It was firſt extracted from the Epſom waters, and has been commonly diſtinguiſhed, both in this and other countries, by the name of Epſom ſalt: but thoſe waters yielding the ſalt very ſparingly, and their quantity being inſufficient for its great demand, it was ſought for elſewhere, and found, in plenty, in the bitter liquor remaining after the cryſtallization of common ſalt from ſea water; from which it is now generally prepared.

This ſalt is a gentle purgative, operating in general with eaſe and ſafety, yet with ſufficient efficacy, and quickly finiſhing its operation: its paſſing off haſtily, and not extending its action ſo far as moſt other purgatives, ſeems to

be

be its principal imperfection. For a full dose, eight or ten drams may be dissolved in a proper quantity of common water, or four or five drams in a pint or quart of the purging waters; to which may be added a little tincture of cardamom seeds, or some other grateful aromatic, to render the liquor more acceptable to the stomach. These liquors, in smaller doses, pass further into the habit, promote the secretions in general, and prove excellent aperients in sundry chronical disorders.

2. SAL CATHARTICUS GLAUBERI, *vulgo sal mirabile.* Glauber's cathartic salt: composed of the vitriolic acid and the mineral alkali *natron*, and hence suffering no change from an admixture of fresh alkali.

This salt was discovered, by the chemist whose name it bears, in extracting the acid spirit of sea salt by means of the vitriolic acid. When oil of vitriol is poured on sea salt, the marine acid, thereby disengaged from its own alkaline basis, begins immediately to exhale, and by applying heat may be totally expelled; the vitriolic acid remaining combined with the natron or marine alkali. This combination is still procured chiefly in the same manner: to the sea salt is added six tenths† or half‡ its weight of oil of vitriol diluted with water, and the marine acid being distilled off, the residuum is dissolved and crystallized. The smallest of these proportions of oil of vitriol appears to be sufficient for expelling the acid and saturating the alkali of the sea salt; but the larger is more eligible, as the Glauber's salt does not well crystallize unless the acid prevails in the solution.

Natron vitriolat. † *Pb. Lond.*

Soda vitriolata *vulgo* sal cath. glauberi ‡ *Pb. Ed.*

This salt is nearly of the same medicinal qualities with the foregoing, which frequently supplies

ſupplies its place in the ſhops. The Glauber's ſalt, ſomewhat the leaſt unpleaſant to the taſte, is ſuppoſed to be the mildeſt of the two, and to operate the moſt kindly.

SAL COMMUNIS.

COMMON or CULINARY SALT; called, from its moſt obvious ſource, ſea ſalt; though found alſo, in immenſe quantities, in the bowels of the earth. It is a perfectly neutral ſalt, compoſed of a peculiar acid denominated from it the *marine acid*, and of the mineral alkali *natron*. It diſſolves in leſs than thrice its weight of boiling water, and does not, like the other neutral ſalts, concrete again in the cold, ſo long as the evaporation of the fluid is prevented; cold water diſſolving nearly as much of this ſalt as boiling water. By gentle continued evaporation it ſhoots into cubical cryſtals, ſeveral of which unite together into the form of hollow truncated pyramids. The cryſtals, expoſed to the fire, burſt and crackle,† ſoon after melt, and appear thin and limpid as water: if the ſalt be melted along with other fuſible ſalts or with vitreous matters, it does not perfectly unite with them, but flows in part diſtinct upon the ſurface. After ſuffering a conſiderable heat, it liquefies in the air.

† Sal decrepitatum.

1. SAL GEMMÆ. Sal gem, rock ſalt, foſſil common ſalt. This is met with in ſeveral parts of the world, but in greateſt plenty in certain deep mines, of prodigious extent, near Cracow in Poland: ſome is likewiſe found in England, particularly in Cheſhire. It is for the moſt part very hard; ſometimes pure, tranſparent and colourleſs; more commonly mixed with earthy

earthy or ſtony matters, of an opake whiteneſs, or of a red, green, blue, or other colours. Theſe laſt ſorts are purified, for the common uſes of ſalt, by ſolution and cryſtallization.

2. SAL MURIATICUS *Pharm. Lond. Sal marinus hiſpanus Pharm. Edinb.* The ſalt extracted from ſea water and ſaline ſprings. Sea waters yield from one fiftieth to about one thirtieth their weight of pure ſalt: from ſeveral ſprings much larger quantities are obtained: thoſe in our own country at Nantwich, Northwich, and Droitwich, afford from one ſixth to one third their weight. Sea water contains, beſides the common ſalt, a portion of purging bitter ſalt, and of another ſaline ſubſtance which remains diſſolved after the cryſtallization of the latter, of a very pungent taſte, ſcarce reducible into a cryſtalline form, compoſed of marine acid and calcareous earth: from both theſe ſalts the ſpring waters are uſually free. There are two general methods of extracting the common ſalt from theſe natural ſolutions of it: the one, a haſty evaporation, continued till the ſalt concretes and falls in grains to the bottom of the pan, from whence it is afterwards raked out, and ſet to drain from the bittern: the other, a ſlow and gradual evaporation, effected in the warmer climates by the ſun's heat, by which the ſalt is formed, not into ſmall grains, but into large cryſtals, called bay-ſalt. The ſalts obtained by theſe two proceſſes differ in ſome reſpects from one another: that got by haſty evaporation, eſpecially if a boiling heat, or one approaching to it, be continued during the time of the ſalts concreting, is apt to liquefy in a moiſt air; an inconvenience which the cryſtallized ſort is not ſubject to: the cryſtals are found

found likewiſe to be ſtronger than the other, and to anſwer better for preſerving proviſions. Both ſorts prove impure and brown-coloured if the ſolutions are evaporated directly, but of perfect whiteneſs if previouſly clarified by boiling with a little ox blood, or other like ſubſtances, which concreting by the heat, inviſcate the unctuous matter, and carry it to the ſurface in form of ſcum. Both ſorts generally retain a portion of the bitter ſalt; whoſe baſis being an earth, ſolutions of them depoſite this earth on the addition of any alkali.

Common salt differs from other ſaline ſubſtances in occaſioning drought, and tending, not to cool, but rather to heat the body. It prevents putrefaction leſs than moſt others, and in ſmall quantities, ſuch as are taken with food, promotes it: by this quality it probably promotes alſo the reſolution of the aliment in the ſtomach, at the ſame time that it proves a mild ſtimulus to that viſcus itſelf. Salted animal foods are generally, perhaps juſtly, accounted one of the principal cauſes of the ſcurvy at ſea; not that the ſalt is of itſelf prejudicial, but on account of its being incapable of preſerving the animal ſubjects, for a length of time, in a perfectly uncorrupted ſtate. Pure ſea ſalt, and ſea water, are rather ſalubrious than hurtful, both in the true ſcurvy, and in impurities of the blood and humours in general. In conſiderable doſes, they act as purgatives: Hoffman obſerves, that an ounce of the ſalt, diſſolved in a proper quantity of water, occaſions commonly ſix ſtools or more, without uneaſineſs; that this ſalt checks the operation of emetics, and carries them off by ſtool; that in glyſters it is more effectual, though uſed only in the quantity of a dram,

dram, than any of the purgatives; and that where other glyſters fail of opening the belly, a ſolution of common ſalt takes place.

* A remarkable inſtance of the efficacy of common ſalt given in very large doſes in a worm caſe, is related in the *Medical Tranſactions of the London College*, vol. i. A perſon reduced to the utmoſt extremity with pain in the ſtomach, obſtinate conſtipation, and contracted limbs, was adviſed, after many remedies had been uſed in vain, to drink ſalt and water. He drank within an hour two pounds of ſalt mixed in two quarts of water. It occaſioned violent vomiting, which brought up a quantity of ſmall worms, and its operation ended with purging and a profuſe ſweat. Great rawneſs and ſoreneſs of the gullet and ſtomach, with unquenchable thirſt, and dyſury, remained. Theſe ſymptoms went off by free dilution; and he ventured the third day after to repeat the doſe of ſalt, which had effects ſimilar to the former. A perfect cure was the conſequence of this ſingular practice.

The common ſorts of ſea ſalt, contrary to other neutral ones, part with a little of their acid in the boiling down of ſolutions of them to dryneſs *(a)*. To this cauſe are attributed the weakneſs of the ſalt prepared by that proceſs,

(a) This acid appears to proceed, not from the pure marine ſalt, but from the calcareous muriatic ſalt, or a combination of marine acid with earth, which all the common ſorts of ſea ſalt are found to partake of. On dropping into a ſolution of common ſea ſalt a little alkaline lye, the earth precipitates; and the acid, being thus ſaturated with alkali, is no longer diſpoſed to evaporate on boiling down the liquor.

and

and its diſpoſition to deliquiate in the air; both which imperfections are ſaid to be corrected by a ſmall addition of freſh acid when the ſalt begins to concrete. Hence alſo diſtilled ſea water is manifeſtly impregnated with acid, ſo as to be unfit for drinking or for the common purpoſes of life; unleſs a little chalk, vegetable aſhes, or other like ſubſtances, be added in the diſtillation, to abſorb and keep down the acid extricated by the heat *(a): by this means the diſtilled fluid proves perfectly ſweet.

The acid of ſea ſalt is completely diſengaged from its alkaline baſis by the more powerful acid of vitriol; and may now be collected, in a concentrated ſtate, by diſtillation; but as, in this concentrated ſtate, its fumes very difficultly condenſe, a little water is commonly added to promote that effect. On ten pounds of dry ſea ſalt, the college of London directs ſix pounds of oil of vitriol diluted with five pints of water, that of Edinburgh one pound of oil of vitriol diluted with equal its quantity of warm water, to be poured by little and little, under a chimney, that the operator may not be incommoded by the noxious fumes: the retort is placed in ſand, and the diſtillation performed with a fire gradually increaſed till nothing more will ariſe. The ſpirit may be freed from its ſuperfluous water, by a ſecond diſtillation in a glaſs cucurbit; the phlegmatic part riſing in a proper degree of heat, while the ſtronger acid

Acidum muriaticum *Pb. Lond.*
Acidum muriaticum *vulgo* ſpir. ſal. marin. *Ph. Ed.*

*(a) This aſſertion is contradicted by the ſucceſs of ſome late attempts to ſupply ſhips with freſh water by the diſtillation of ſea water. In theſe, good ſweet water was obtained merely by fitting an apparatus to the ſhips' boilers in which ſalt water was uſed for common purpoſes. See, particularly, *Phipp's Voyage towards the North Pole.*

remains

remains behind. The diſtilled ſpirit proves nearly the ſame, whether the larger or ſmaller of the above proportions of oil of vitriol are uſed, the difference affecting chiefly the reſiduum: ſee the foregoing article. Its ſpecific weight to that of water is ſtated by the London college at 1170 to 1000.

The marine acid is diſtinguiſhed from the others, by its riſing in white fumes; by its peculiar pungent ſmell; by its enabling the nitrous acid to diſſolve gold, preventing its diſſolving ſilver, and precipitating ſilver previouſly diſſolved, but producing no precipitation in ſolutions of calcareous earths. It is ſometimes given, from ten to ſixty or ſeventy drops, properly diluted, as an antiphlogiſtic, diuretic, and for promoting appetite, and applied externally to chilblains, which are ſaid by Linnæus to be radically cured by it in a ſhort time, without fear of a return; but its principal uſe is in combination with other bodies.

Combined with volatile alkalies, it produces the officinal ſal ammoniac. With the mineral fixt alkali, it regenerates common ſalt. With vegetable fixt alkalies, it forms a neutral ſalt of a ſharper taſte, and ſomewhat more difficult of fuſion and ſolution, than common ſalt: this combination is prepared in the ſhops, by dropping into the marine ſpirit a lixivium of the fixt alkali till all effervescence ceaſes, and then evaporating the mixture to dryneſs: the ſame ſalt may be obtained from the matter which remains after the diſtillation of ſpirit of ſal ammoniac with fixt alkali.

Sal marin. regeneratus *vulgo.*

With calcareous earths, it forms a very pungent ſaline compound, which difficultly aſſumes a cryſtalline form, deliquiates in the air, diſſolves

Sal ammon. fixum *vulgo.* Sal muriatic. calcareus.

ſolves not only in water but in rectified ſpirit of wine, and changes the colour of blue flowers of vegetables to a green. This ſalt is contained, in conſiderable quantity, in ſea water, and remains fluid after the cryſtallization of its other ſaline matters: it is found alſo in ſundry common waters, to which, like the calcareous nitre, it communicates, according to its quantity, a greater or leſs degree of hardneſs and indiſpoſition to putrefy: it is far more antiſeptic than the perfect marine ſalt. It is ſaid to be diuretic and lithontriptic: the medicine commonly ſold as a lithontriptic under the name of *liquid-ſhell*, appears to be no other than a combination of this kind, conſiſting of calcined ſhells diſſolved in marine acid. Theſe combinations have been chiefly prepared, by mixing the calcareous earth with ſal ammoniac, and urging the mixture with a gradual fire, till the volatile alkali of the ſal ammoniac is either diſſipated in the air or collected by diſtillation, and only its acid left incorporated with the earth: ſo much of the earth, as is ſatiated with the acid, may be ſeparated from the reſt by elixation with water.

This acid diſſolves, among metallic bodies, zinc and iron pretty readily; copper and tin languidly; biſmuth and arſenic very difficultly and ſparingly; lead, mercury, regulus of antimony, and ſilver, not at all, unleſs highly concentrated and applied in the form of fume: it diſſolves, by digeſtion, all metallic bodies when reduced to a ſtate of calx, gold not excepted. Though it difficultly unites with metals, it adheres to moſt of them more ſtrongly than any other acid, and in part volatilizes them: it renders them likewiſe more fuſible in the fire than the other acids do, and more diſpoſed to ſolution in ſpirit of wine.

Of itſelf it is nevertheleſs the moſt averſe of all acids to a perfect union with vinous ſpirits. If poured gradually into thrice its quantity of rectified ſpirit of wine, and the mixture, after digeſtion for ſome days, ſubmitted to diſtillation in a ſand heat; the ſpirit that comes over, appears to be little other than the acid ſimply diluted with the vinous ſpirit; whereas, when the nitrous or vitriolic acids are treated in the ſame manner, a new compound is formed by the intimate coalition of the acid ſpirit with the inflammable *(a)*. The dulcified marine acid has by ſome been held in great eſteem againſt weakneſs of the ſtomach, indigeſtion, and other like complaints brought on by irregularities.

SALIX.

SALIX Pharm. Edinb. Salix vulgaris alba arboreſcens C. B. Salix Ger. Salix fragilis Linn. COMMON WHITE WILLOW: a pretty large tree, frequent in moiſt woods and hedges; producing looſe ſpikes or catkins, either of imperfect barren flowers, or of ſeeds incloſed in down: it is the largeſt of the willows; and differs from the others, in the oblong pointed ſerrated leaves

(a) It is ſaid that the marine acid may be combined with vinous ſpirits as intimately as the others, and an ethereal fluid produced from the mixture, by applying the acid ſpirit to the vinous while both are reſolved by fire into vapour; or more commodiouſly, by uſing the acid in a high degree of concentration, ſuch as is obtained by diſtillation from a mixture of mercury ſublimate with tin, commonly called the *ſmoking ſpirit of Libavius*, and proceeding with this ſpirit and ſpirit of wine, in the ſame manner as with the other acids. It is ſuppoſed that this acid, in diſtillation from metallic ſubſtances, takes up a portion of the inflammable principle of the metal, which promotes its union with the vinous ſpirit.

being

being hoary on both ſides, though moſt ſo on the lower, and in the branches not being tough.

The bark of this tree has lately been found an uſeful medicine in agues, of which many perſons have been cured by taking a dram of the powdered bark every four hours during the intermiſſions, though in ſome caſes it was neceſſary to join to it a little Peruvian bark (ſee the *Philoſophical Tranſactions* for the year 1763). To the taſte this bark diſcovers a pretty ſtrong bitterneſs and aſtringency: with ſolution of chalybeate vitriol, it ſtrikes an inky blackneſs. Theſe obſervations ſerve therefore to confirm what has been remarked under the head of the Peruvian bark, that in the diſtempers where that valuable medicine takes place, other bitters and aſtringents are likewiſe uſeful, though in an inferiour degree. The aſtringency of the willow bark is extracted both by water and ſpirit; and the black matter, produced by adding vitriol to the watery infuſion, is not diſpoſed to precipitate.

SALVIA.

SAGE: a low ſhrubby plant, with ſquare ſtalks; obtuſe wrinkled dry leaves ſet in pairs, and large bluiſh labiated flowers, in looſe ſpikes on the tops of the branches: the upper lip of the flower is nipt at the extremity, the lower divided into three ſegments. It is a native of the ſouthern parts of Europe, common in our gardens, and flowers in June.

1. Salvia *Pharm. Lond. & Edinb. Salvia major C. B. Salvia officinalis Linn.* Common ſage: with the leaves nearly oval, but acuminated, ſometimes green and ſometimes red:

both the green and red ſorts riſe from the ſeeds of one and the ſame plant.

2. SALVIA HORTENSIS MINOR. *Salvia minor aurita & non aurita C. B.* Small ſage, or ſage of virtue: with narrower leaves, generally whitiſh, never red: moſt of them have at the bottom a piece ſtanding out at each ſide in the form of ears. This is a variety of the former.

THE leaves and tops of ſage are moderately aromatic and corroborant, and uſed in debilities and relaxations both of the nervous and vaſcular ſyſtem. Their ſmell is pretty ſtrong and not diſagreeable; their taſte ſomewhat warm, bitteriſh, and ſubaſtringent: with ſolution of chalybeate vitriol, they ſtrike a deep black colour. The ſecond ſort is both in ſmell and taſte the ſtrongeſt, the firſt moſt agreeable. Of both kinds, the flowers are weaker and more grateful than the leaves; and the cup of the flower ſtronger, and obviouſly more reſinous, than any other part.

The leaves of ſage give out their virtue both to water and rectified ſpirit, moſt perfectly to the latter; to the former they impart a browniſh, to the latter a dark green tincture. The watery infuſion is often uſed as tea, and often acidulated with a little lemon juice for a diluent in febrile diſtempers: the ſpirituous tincture is in taſte ſtronger than the watery, but the ſmell of the ſage is by this menſtruum covered or ſuppreſſed. The leaves and flowery tops, diſtilled with water, yield a ſmall quantity of eſſential oil, ſmelling ſtrongly and agreeably of the herb, in taſte very warm and pungent, when newly diſtilled of a fine greeniſh colour, by age turning yellow or brown: the remaining decoction, di-

veſted

veſted of this aromatic and moſt active principle of the ſage, yields an extract weakly bitteriſh, ſubaſtringent, and ſubſaline. The ſpirituous extract, in ſmell weak and ſomewhat different in kind from that of the herb itſelf, diſcovers to the taſte a conſiderable aromatic warmth and pungency, reſembling that of camphor, but milder.

SAMBUCUS.

ELDER: a plant, with finely ſerrated ſharp-pointed leaves, ſet in pairs on a middle rib, with an odd one at the end; producing, on the tops of the branches, umbel-like cluſters of ſmall white flowers, followed each by a juicy berry, containing generally three ſeeds.

1. SAMBUCUS *Pharm. Lond. & Edinb. Sambucus fructu in umbella nigro C. B. Acte. Sambucus nigra Linn.* Elder tree: with nearly oval leaves, of which five or ſeven ſtand on one rib. It is a ſmall tree or ſhrub, covered with an aſh-coloured chapt bark, under which lies a thinner green one, and under this a white: it grows wild in hedges, flowers in May, and ripens its black berries in September.

The bark of this tree is recommended as a ſtrong hydragogue in hydropic caſes. Sydenham directs three handfuls of the inner bark to be boiled in a quart of milk and water till only a pint remains, of which one half is to be taken in the morning, and the other at night, and this repeated every day: he obſerves, that this medicine operates both upwards and downwards; and that if it does not vomit or purge at all, or but gently, it does no ſervice. Boerhaave ſays, that the expreſſed juice of the middle bark,

given from a dram to half an ounce (ſome go as far an ounce), is the beſt of hydragogues where the viſcera are ſound; and that it ſo powerfully diſſolves the humours, and procures ſo plentiful watery diſcharges from all the emunctories, that the patient is ready to faint from the large and ſudden inanition. The decoction and juice are recommended alſo, in ſmaller doſes, as uſeful aperients and deobſtruents in different chronical diſorders. This bark has ſcarcely any ſmell, and very little taſte: on firſt chewing, it impreſſes a kind of ſweetiſhneſs, which is followed by a very ſlight but very durable acrimony, in which its medical activity ſeems to reſide, and which it imparts both to watery and ſpirituous menſtrua.

The leaves, of a faint unpleaſant ſmell, and a ſtrong, very nauſeous, bitter kind of taſte, are ſaid to be purgative and emetic like the bark. They are celebrated externally againſt burns and inflammations, and for theſe purpoſes an ointment has been prepared for them in the ſhops: four ounces of the leaves, and the ſame quantity of the inner bark, freſh, were thoroughly bruiſed, and boiled in a quart of linſeed oil till the watery moiſture was conſumed and the oil tinged of a green colour: the oil was then preſſed out, and brought to the conſiſtence of an ointment by melting in it ſix ounces of white wax.

The flowers of elder have an agreeable flavour, which they give over in diſtillation with water, and impart by infuſion both to water and rectified ſpirit: on diſtilling with water a large quantity of the flowers, a ſmall portion of a butyraceous eſſential oil ſeparates. Infuſions made from them while freſh are gently laxative and aperient: when dry, they are ſaid to promote

mote chiefly the cuticular excretion, and to be particularly ſerviceable in eryſipelatous and eruptive diſorders. From theſe alſo an unguent is prepared, probably of equal efficacy with the other, and preferred by ſome as being more elegant, by melting three pounds of mutton ſuet with a pint of oil-olive, and boiling in this mixture four pounds of the full blown flowers till they are almoſt criſp. Unguentum ſambuci *Ph. Lond.*

The berries, in taſte ſweetiſh and not unpleaſant, yield on expreſſion a fine purpliſh juice, which inſpiſſated to the conſiſtence of honey, either by itſelf or with the addition of half a pound of fine ſugar to two pounds and an half ‡, proves an uſeful aperient and reſolvent in recent colds and ſundry chronical diſorders, gently looſening the belly, and promoting urine and perſpiration. Succ. bacc. ſambuci ſpiſſat. *Ph. Lond.* Rob baccar. ſambuci ‡ *Ph. Ed.*

2. EBULUS. *Sambucus humilis ſive ebulus C. B. Chamæacte. Sambucus Ebulus Linn.* Dwarf-elder or Danewort: an herbaceous plant, dying to the ground in winter; with longer leaves than thoſe of the elder tree, and nine leaves on one rib. It grows wild in ſome parts of England, flowers in July, and produces ripe black berries in the beginning of September.

It is ſaid that this ſpecies has the ſame virtues with the preceding, but differs ſomewhat in degree: that the bark (that of the root has been chiefly uſed) and the berries, are reſpectively more efficacious, and the leaves leſs ſo: that the rob or inſpiſſated juice of the berries, in doſes of half an ounce to an ounce, acts as a ſtrong hydragogue, and in ſmaller doſes as a powerful reſolvent and deobſtruent.

SANGUIS DRACONIS.

SANGUIS DRACONIS Pharm. Lond. & Edinb. Cinnabaris Græcorum. DRAGONS-BLOOD, ſo called: a reſin, obtained from certain large palm-like trees *(Palmijuncus Draco Rumph. amb. Calamus Rotang Linn.)* growing in the Eaſt Indies; brought over in oval drops wrapt up in flag-leaves, or in large and generally more impure maſſes compoſed of ſmaller tears; of a deep dark red colour, which changes, in pulverization, to a crimſon. Sundry artificial compoſitions, coloured with the true dragons-blood, or with brazil wood or other materials, have been ſometimes ſold in the room of this commodity: ſome of theſe diſſolve like gums in water, and others crackle in the fire without proving inflammable; whereas the genuine dragons-blood readily melts and catches flame, and is ſcarcely acted on by watery liquors. It diſſolves almoſt totally, by the aſſiſtance of heat, in rectified ſpirit, and tinges a large quantity of the menſtruum of a deep red colour: it is likewiſe ſoluble in expreſſed oils, and imparts to them a red tincture, leſs beautiful than that which anchuſa communicates.

THIS reſin, in ſubſtance, has no perceptible ſmell or taſte: when diſſolved, whether in vinous ſpirits or in oils, it diſcovers ſome degree of pungency and warmth. It is uſually looked upon as a gentle incraſſant, deſiccative, and reſtringent; and ſometimes preſcribed in theſe intentions againſt alvine and uterine fluxes, and ulcerations both internal and external.

SANI-

SANICULA.

SANICULA officinarum C. B. Sanicula europæa Linn. SANICLE: an umbelliferous plant, with ſhining dark green roundiſh leaves, cut into five ſegments, ſerrated about the edges; and rough ſeeds, which ſtick to the clothes. It is perennial and evergreen, grows wild in woods on hilly grounds, and flowers in May.

THIS herb, recommended both externally and internally as a vulnerary or mild reſtringent, and ſuppoſed to have received its name from the ſanative virtues aſcribed to it, diſcovers to the taſte a kind of bitteriſhneſs and roughneſs, followed by an impreſſion of acrimony which affects chiefly the throat: in the freſh leaves, the taſte is very weak; in the dry leaves, conſiderable; in the extracts made from them, by water and ſpirit, moderately ſtrong.

SANTALUM.

SAUNDERS. Three different woods are brought under this name from the Eaſt Indies, in large billets: they are ſaid to be the produce, chiefly, of the iſland Timor in the Indian ocean.

1. SANTALUM CITRINUM *Pharm. Edinb. Santalum album Linn.*(a).* Yellow ſaunders: of a pale yelloviſh or browniſh colour, and a cloſe even grain. This wood has a pleaſant ſmell, and a bitteriſh aromatic taſte accompanied with an agreeable kind of pungency.

*(a) The Santalum album, below, is ſaid not to be a wood of a different ſpecies, but the *alburnum* of the trunk of the ſame tree, the medullary part of which is the citrinum.

Diſtilled

Diſtilled with water, it yields a fragrant eſſential oil, which thickens in the cold into the conſiſtence of a balſam, approaching in ſmell to ambergris, or a mixture of ambergris and roſes: the remaining decoction, inſpiſſated to the conſiſtence of an extract, is bitteriſh and ſlightly pungent. Rectified ſpirit extracts, by digeſtion, conſiderably more than water: the colour of the tincture is a rich yellow. The ſpirit, diſtilled off, is lightly impregnated with the fine flavour of the wood: the remaining browniſh extract has a weak ſmell, and a moderate balſamic pungency. This wood therefore, though at preſent among us diſregarded, promiſes to have a good claim to the corroborant virtues aſcribed to it by Hoffman and others.

2. SANTALUM ALBUM. White ſaunders: of a cloſe texture and ſtraight fibres like the preceding, but of a paler whitiſh colour. This ſpecies, far weaker than the yellow, both in ſmell and taſte, promiſes very little medicinal virtue: it has long been entirely neglected, and is now rarely to be met with in the ſhops.

3. SANTALUM RUBRUM *Pharm. Lond. & Edinb. Pterocarpus Santolinus Linn. Suppl.* Red ſaunders: of a dull red almoſt blackiſh colour on the outſide, and a deep brighter red within: its fibres are now and then curled, as in knots. This alſo, recommended as an aſtringent and corroborant, appears to be of very little virtue, as it has no manifeſt ſmell, and little or no taſte: even of extracts made from it, with water or with ſpirit, the taſte is inconſiderable. Its principal uſe is as a colouring drug. To watery liquors it communicates only a yellowiſh tinge, but to rectified ſpirit a fine deep red: a ſmall quantity

quantity of an extract made with this menstruum tinges a large one of fresh spirit of the same elegant colour; though it does not, like most other resinous bodies, dissolve in expressed oils, or communicate its colour to them: of distilled oils, there are some, as that of lavender, which receive a red tincture both from the wood itself and from the resinous extract, but the greater number does not.

Geoffroy and others take notice that the brazil woods are sometimes substituted to red saunders, and the college of Brussels doubts whether all that is sold among them for saunders is not really a wood of that kind. According to the account which they have given of their red saunders, it is plainly the brasil wood of the dyers; the distinguishing character of which is, that it imparts its colour to common water. Of the same kind also is the wood examined by Cartheuser under the name of red saunders, the watery infusion and extract of which were both of a dark red.

SANTONICUM.

SANTONICUM SEMEN Pharm. Lond. & Edinb. Semen cinæ, semen sanctum, semen contra, sementina. WORMSEED: a small light oval seed; composed as it were of a number of thin membranous coats; of a yellowish-greenish colour with a cast of brown; easily friable, by rubbing between the fingers, into a fine chaffy kind of substance. The seeds have commonly mixed with them a considerable quantity of this chaffy matter, and small bits of stalks and leaves. They are brought from the Levant, and supposed to be the produce of a species of *artemisia*, resembling in its general appearance our fine-leaved

leaved mugwort, called by Linnæus *Artemiſia (Santonicum) foliis caulinis linearibus pinnato-multifidis, ramis indiviſis, ſpicis ſecundis reflexis*; the *Artemiſia auſtriaca* of Jacquin.

These ſeeds have a moderately ſtrong, not agreeable ſmell, ſomewhat of the wormwood kind; and a very bitter ſubacrid taſte. They have been chiefly recommended as anthelmintics; and commonly taken, in this intention, either along with melaſſes, or candied with ſugar. They might be uſed alſo for other purpoſes; as they appear (at leaſt the ſpecimens which I examined) to be a not inelegant ſtrong bitter. They give out their virtue both to water and ſpirit, together with a browniſh hue, which in the watery tincture has an admixture of reddiſh, in the ſpirituous of yellow: the ſpirituous is leſs ungrateful in taſte, and diſcovers leſs alſo of the ill ſmell of the ſantonicum than the watery infuſion. In evaporation, water carries off greateſt part of the diſagreeable flavour of the ſeeds, the inſpiſſated extract being little other than ſimply bitter. An extract made by rectified ſpirit retains a conſiderable ſhare of the flavour: this extract appears to be the moſt eligible preparation of the ſantonicum for the purpoſes of an anthelmintic; and the watery extract, or a tincture drawn from it, for the more general intentions of bitter medicines.

SAPO.

SOAP: a compoſition of oils or fats with alkaline ſalts, incorporated ſo as to diſſolve together in water into a milky ſemitranſparent liquid.

1. Sapo

1. SAPO DURUS. Hard ſoap. The fineſt hard ſoap is prepared with freſh-drawn oil of almonds, by digeſting it with thrice its meaſure of the ſoap-lyes, formerly deſcribed (ſee *Sales alkalini*) in ſuch a heat that they may juſt ſimmer. In a few hours they unite into a turbid fluid, which, on being boiled a little, becomes more tranſparent, and ropy, ſo that if a little be ſuffered to cool, it will concrete like jelly. Some ſea ſalt is now thrown in, till the boiling liquor loſes its ropineſs; and the coction continued till, on receiving ſome drops upon a tile, the ſoap is found to coagulate, and the water to freely ſeparate from it. The fire being then removed, the ſoap riſes gradually to the ſurface; from whence it is taken off before it grows cold, and put into a wooden mould, or frame, with a cloth bottom: being afterwards ſeparated from the mould, it is ſet by till it has acquired a due conſiſtence. After the ſame manner a hard ſoap is made with oil-olive, which ſhould be of the fineſt kind, that the ſoap may prove as little ungrateful as poſſible either to the palate or ſtomach. By the ſame or ſimilar proceſſes this commodity is prepared for common uſes in the way of trade. The fineſt of the common ſoaps is that called Spaniſh or Caſtile ſoap, which is made with oil-olive, and the alkaline ſalt called ſoda or barilla: our ſoap-boilers find that this alkali gives a better conſiſtence, or greater hardneſs to the ſoap, than the other potaſhes or common vegetable alkalies.

Sapo amygdalinus.

Sapo *Ph. Lond. mat. med.*

Sapo albus hiſpanus *Ph. Ed. mat. med.*

Hard ſoap, triturated with vegetable reſins and thick balſams, incorporates with them into a compound, ſoluble, like the ſoap itſelf, in watery liquors: hence it proves an uſeful ingredient in reſinous pills, which of themſelves are apt to paſs entire through the inteſtines, but by the

the admixture of ſoap become diſſoluble in the ſtomach. It renders unctuous and thick mucous animal matters diſſoluble in like manner in aqueous fluids, and hence may be preſumed to act as a menſtruum for theſe kinds of ſubſtances in the body, that is to attenuate viſcid juices and reſolve obſtructions: ſuch, in effect, are the virtues which it appears to exert in cachectic, hydropic, and icteric caſes, in which laſt, particularly, its aperient and reſolvent powers have been often experienced. Solutions of it have been found likewiſe to diſſolve certain animal concretions of the harder kind, as the filaments which are ſometimes ſeen floating in the urine of rheumatic and arthritic perſons, the matter ſecreted in gouty joints, and the more compact urinary calculus: on theſe ſubſtances (at leaſt on the latter) though ſoap of itſelf acts more languidly than lime-water, yet when joined to that menſtruum it remarkably increaſes its activity, the diſſolving power of a compoſition of the two being, according to Dr. Whytt's experiments, conſiderably greater than that of the ſoap and lime-water unmixed: of the good effects of theſe medicines in calculous caſes there are ſeveral inſtances; but what their effects may be in gouty and rheumatic ones, is not yet well known.

The uſual doſe of ſoap, as an aperient, is half a dram or a dram: as a lithontriptic, half an ounce, or an ounce, or more, are taken in a day at proper intervals. It is given in the form of a bolus or pills; or made into an electuary with ſome grateful ſyrup, as that of orange peel; or diſſolved in milk or other liquids. * It is excellently covered by chocolate: two drams in a pint are not in the leaſt perceived;

perceived; the chocolate is thought by some better than without it. A little soap is always added in the composition of chocolate, to make it froth.

In watery liquors it dissolves only imperfectly, the solution being always turbid. Rectified spirit, though it has no action on the alkaline salt or oil separately, dissolves the soap into a limpid liquor. Proof spirit, free from acidity, dissolves it as perfectly, and in much larger quantity; rectified spirit not taking up one tenth its own weight, but proof spirit one third or more. The spirituous solutions bear to be largely diluted with pure water, without suffering any turbidness or separation of their parts: but on the addition of any acid, or of any combination of acids with earthy or metallic bodies, as the *sal catharticus amarus*, &c. the soap is resolved into its constituent ingredients; its alkaline salt being absorbed by the acid, and the oil rising to the surface. The oil, thus extricated from soap by acids, dissolves like essential oils, in rectified spirit.

Soap is employed externally for discussing rheumatic pains, arthritic tumours, the humours stagnating after sprains, &c. Some pretend that the indurated tophaceous concretions in arthritic joints have been resolved by the external use of soapy cataplasms. Several compositions for external purposes are prepared in the shops. One part of Spanish soap, shaved or cut in thin slices, is stirred into six parts of common plaster melted over the fire, and the mixture boiled till it acquires the consistence of a plaster; which is formed into rolls whilst hot, the soap disposing it to grow brittle as it cools†: some endeavour to promote the resolvent virtue of the soap, by adding to four parts

Emplastrum saponis † *Ph. Lond.*

parts of the common plaſter, two of gum plaſter, with one of ſoap‡. But ſoap acts to much better advantage in the form of a cataplaſm or liniment, than in the ſtiff one of a plaſter. The officinal ſaponaceous liniments are made, by digeſting three ounces of Spaniſh ſoap in a pint of ſpirit of roſemary till the ſpirit is ſaturated, and diſſolving in this ſolution an ounce of camphor‖: or by digeſting two ounces of ſoap in a pint of rectified ſpirit of wine, and afterwards adding an ounce of camphor, and two drams of oil of roſemary§. Sometimes opium is joined, by which the compound is ſuppoſed to be rendered more effectual for allaying violent pains: half an ounce of opium is digeſted with the ſoap in the laſt mentioned compoſition. This is given alſo internally, in nervous colics, jaundices, &c.

Emp. ſaponac. † *Ph. Ed.*

Linimentum ſaponis ‖ *Ph. Lond.*

vulgo Balſ. ſaponaceum § *Ph. Ed.*

Linimentum anodynum *vulgo* Balſ. anodyn. *Ph. Ed.*

2. SAPO MOLLIS. Soft ſoap. The common ſoft ſoap uſed about London, generally of a greeniſh hue with ſome white lumps, is prepared chiefly with tallow: a blackiſh ſort more common in ſome other places, is ſaid to be made with whale oil. Both kinds are conſiderably more acrid than the hard ſoaps, and are employed only for ſome external purpoſes: a mixture of equal parts of our common ſoft ſoap and quicklime is uſed as a mild cauſtic.

3. SAPO VOLATILIS. Volatile ſoap. Of this there are three kinds: one compoſed of fixt alkalies and volatile oils; another, of volatile alkalies, and oils of the groſſer or more fixt kind; and the third, in which both the alkali and the oil are volatile.

Fixt alkalies are very difficultly made to unite with diſtilled oils. The moſt commodi-

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ous method of obtaining the combination appears to be, by throwing the ſalt red-hot into a heated mortar, immediately reducing it into powder, then pouring on it, while it continues quite hot, by little at a time, an equal quantity or more of the oil, and continuing to grind them together, ſo as to form a ſmooth ſoft maſs. Stahl reports that the union may ſoon be obtained alſo, by agitating the ſalt with a ſmall proportion of the oil, and a quantity of phlegmatic vinous ſpirit; the ſpirit ſeeming to ſerve as a medium for joining them together. This medicine, prepared with oil of turpentine, was formerly celebrated as a diuretic, in nephritic complaints, and as a corrector of certain vegetables, particularly of opium: its virtues have not been fully determined by experience, nor does the preſent practice pay any regard to it. Beaumé obſerves, that it conſiſts of only the reſinous part of the oil united with the alkali; that the more fluid and well rectified the oil is, the leſs ſoap is obtained; and that by adding a little turpentine in ſubſtance, the preparation is conſiderably expedited.

Sapo philoſophicus tartareus, &c.

Combinations of volatile alkalies with expreſſed oils, and with the oily balſamic juices, are obtained more readily. One ounce of ſpirit of ſal ammoniac, and three of oil of olives, ſhaken together in a wide-mouthed vial, unite perfectly, in a ſhort time, into a white ſaponaceous liquid: or, for a more active preparation, one ounce of the volatile ſpirit with quicklime is ſhaken with two ounces of olive oil. Both theſe compoſitions are very acrimonious, and are uſed only externally, as ſtimulants, in rheumatic and iſchiadic pains.

Liniment. ammoniæ *Ph. Lond.*

Linim. ammoniæ fortius *Ph. Lond.*

Combinations of volatile alkalies with volatile oils, in a liquid form, have been already men-

tioned under the head of *ſal alkalinus volatilis*: compoſitions of the ſame kind may be obtained in a ſolid ſtate, by mixing the ſalt with the oil, and ſubliming them together. It may be obſerved, that in all theſe combinations made with volatile ſalts, though the pungency of the ſalt is more or leſs covered, it is never completely ſheathed as that of the fixt alkalies is in the hard ſoaps; and that none of the compoſitions, in which either the alkali or the oil is volatile, are ſo perfectly ſaponaceous as thoſe in which they are both of the more fixt kind.

SAPONARIA.

SAPONARIA major lævis C. B. Saponaria officinalis Linn. SOAPWORT or BRUISEWORT: a ſmooth herb, with plantain-like three-ribbed leaves ſet in pairs on ſhort broad pedicles; producing, on the tops of the ſtalks, umbel-like cluſters of red, purple, or whitiſh flowers, cut deeply into five ſegments nipt at the ends, ſtanding in long cups, followed by pear-ſhaped capſules full of ſmall ſeeds: the root is long, ſlender, ſpreading to a great diſtance, ſo as ſcarce to be extirpated, of a browniſh colour on the outſide, internally white, with a yellowiſh fibre in the middle. It grows wild, but not very common, in moiſt grounds, and flowers in July.

THE roots and leaves of ſaponaria diſcover to the taſte a kind of glutinous ſoftneſs or ſmoothneſs; accompanied, in the roots, with a ſweetiſhneſs and ſlight pungency; in the leaves, with a degree of bitterneſs and roughneſs. The ſmoothneſs or ſoapineſs, from which the plant received its name, is ſtrongeſt in the leaves; which,

which, on being agitated with water, raiſe a ſlippery froth, and are ſaid to impart a detergent quality approaching to that of ſolutions of ſoap itſelf. This matter is diſſolved alſo by rectified ſpirit as well as water, and hence appears evidently of a different nature from gummy or mucilaginous ſubſtances: on inſpiſſating the ſolutions, it remains entire in the extracts, and proves ſtronger in the ſpirituous extract than in the watery. This plant therefore, among us diſregarded, may be preſumed to have ſome conſiderable medicinal virtues: by the German phyſicians, the roots are uſed in venereal maladies, and ſuppoſed to be ſimilar, but ſuperiour, to thoſe of ſarſaparilla. * A phyſician in Paris is ſaid lately to have given the inſpiſſated juice of this plant to the quantity of half an ounce in a day, to perſons labouring under a gonorrhœa, with ſucceſs.

SAPONARIÆ NUCULÆ.

NUCULÆ ſaponariæ non edules C. B. Saponariæ ſphærulæ arboris filicifoliæ J. B. Baccæ bermudenſes Marloe. SOAP-BERRIES: a ſpherical fruit, about the ſize of a cherry; whoſe cortical part is yellow, gloſſy, and ſo tranſparent, as to ſhew the ſpherical black nut, which rattles within, and which includes a white kernel. It is the produce of a ſmall tree, growing in Jamaica and other parts of the Weſt Indies, called by Sir Hans Sloane *prunifera racemoſa, folio alato, coſta media membranulis utrinque extantibus donata, fructu ſaponario*; by Linnæus, *Sapindus Saponaria.*

IT is ſaid that this fruit, at leaſt its cortical part, has a very bitter taſte, and no ſmell: that

it raiſes a ſoapy froth with water, and has ſimilar effects with ſoap in waſhing: that it is a medicine of ſingular and ſpecific virtue in chloroſes: and that a tincture or extract are preferable to the berry in ſubſtance, from whence it may be preſumed that its ſoapy matter, like that of the ſaponaria, is diſſoluble in ſpirit. Its medicinal virtue was firſt publiſhed by Marloe in a letter to Mr. Boyle; but the fruit having been concealed under the fictitious name of Bermudas berries, its uſe died with the author. That Marloe's Bermudas berries were the ſame with the ſoap-berries of America, had been ſuſpected by ſome, and was confirmed by Dale in examining the Bermudas berries which Marloe had left under that title behind him. They are ſtill, however, unknown in practice, and in the ſhops.

SARCOCOLLA.

SARCOCOLLA Pharm. Lond. A concrete gummy-reſinous juice, brought from Perſia and Arabia, in ſmall, ſpongy, crumbly, whitiſh-yellow grains, with a few of a reddiſh and ſometimes of a deep red colour mixed with them: the tears, when entire, are about the ſize of peas: the whiteſt tears or fragments are preferred, as being the freſheſt. The plant which produces this juice, and the place of its production, are unknown.

Sarcocolla has a bitteriſh ſubacrid taſte, followed by a nauſeous kind of ſweetiſhneſs. It ſoftens in the mouth, bubbles and catches flame from a candle, diſſolves almoſt wholly in water, and greateſt part of it in rectified ſpirit. Its medicinal qualities are not well known: it is ſaid,

ſaid, when taken internally, to act as a ſlow and dangerous purgative; externally, to cleanſe and promote the cicatrization of ulcers: diſſolved in breaſt-milk, to be an uſeful collyrium for defluxions on the eyes.

SARSAPARILLA.

SARSAPARILLA Pharm. Lond. & Edinb. Zarza quibuſdam: the root of a ſpecies of bindweed, *ſmilax aſpera peruviana ſive ſarſaparilla C. B. Smilax (ſarſaparilla) caule aculeato angulato, foliis inermibus retuſo-mucronatis Linn.* growing in the Spaniſh Weſt Indies, and ſcarcely bearing the winters of our climate without ſhelter. The root conſiſts of a number of ſtrings, of great length, about the thickneſs of a gooſe-quill or thicker, flexible, free from knots, compoſed of fibres running their whole length, ſo that they may be ſtript in pieces from one end to the other. They are covered with a thin, browniſh, or yellowiſh aſh-coloured ſkin, under which lies a thicker, white, friable ſubſtance, and in the middle runs a woody pith.

This root has a farinaceous ſomewhat bitteriſh taſte, and no ſmell. To water it communicates a reddiſh brown, to rectified ſpirit a yellowiſh red tincture, but gives no conſiderable taſte to either menſtruum. An extract, obtained by inſpiſſating the ſpirituous tincture, has a weak, ſomewhat nauſeous, balſamic bitteriſhneſs, which is followed by a ſlight but durable pungency: the watery extract is much weaker, and in larger quantity.

Sarſaparilla was firſt brought into Europe by the Spaniards, about the year 1563, with the

character of a ſpecific for the cure of the lues venerea, which made its appearance a little before that time. Whatever good effects it might have produced in the warmer climates, it was found to be inſufficient in this, inſomuch that many have denied it to have any virtue at all, and ſuppoſed that it could do no more than, by its farinaceous ſoftneſs, to obtund the force of the gaſtric fluid, and thus weaken the appetite and digeſtion. It appears however, from experience, that though greatly unequal to the character which it bore at firſt, yet, in many caſes, ſtrong decoctions of it, drank plentifully and duly continued, are of very conſiderable ſervice, for promoting perſpiration, and what is called ſweetening or purifying the blood and humours. In the medical obſervations publiſhed by a ſociety of phyſicians in London, there are ſeveral inſtances of its efficacy in venereal maladies, as an aſſiſtant to mercury, or when mercury had preceded it uſe: it oftentimes anſwered, and that ſpeedily, after mercurial unctions, and long continued courſes of ſtrong decoctions of guaiacum, had failed. Three ounces of the root are boiled in three quarts of river water, till the liquor when ſtrained amounts to about one quart, which is taken at three or four doſes, either warm or cold, every twenty-four hours. Dr. Harris ſays, that infants who have received the infection from the nurſe, though full of puſtules and ulcers, and ſometimes troubled with nocturnal pains, are cured by ſarſaparilla without mercurials: he directs the powder of the root to be mixed with their food.

Decoct. ſarſapar. *Ph. Lond.*

*The London college have now admitted as officinals a ſimple decoction of ſarſaparilla, made by boiling (after maceration) ſix ounces of the root

root in eight pints of water to four; and a compound one, in which, to ſix ounces of ſarſaparilla are added one ounce each of ſaſſafras, guaiacum wood, and liquorice, and three drams of the bark of mezereon root, to be boiled in ten pints of water to five.

Decoct. ſarſapar. comp. *Ph. Lond.*

SASSAFRAS.

SASSAFRAS Pharm. Lond. & Edinb. The root of a large American tree of the bay kind, *(laurus (ſaſſafras) foliis integris trilobiſque Linn. Arbor ex florida ſiculneo folio C. B.)* brought over in long ſtraight pieces, very light and of a ſpongy texture, covered with a rough fungous bark, outwardly of an aſh-colour, inwardly of the colour of ruſty iron.

This root has a fragrant ſmell, and a ſweetiſh ſubaſtringent, aromatic taſte: the bark is much ſtronger than the internal woody part, and the ſmall twigs than the larger pieces. It gives out its virtues, together with a reddiſh colour, totally to ſpirit, leſs perfectly to water: the ſpirituous tincture ſmells weakly and taſtes ſtrongly, the watery ſmells ſtronger and taſtes weaker of the root. Diſtilled with water, it yields a fragrant eſſential oil, of a penetrating pungent taſte, ſo ponderous as to ſink in water, limpid and colourleſs when newly diſtilled, by age growing yellowiſh and at length of a reddiſh brown colour: the remaining decoction, inſpiſſated, yields a bitteriſh ſubaſtringent extract. Rectified ſpirit, diſtilled from the tincture made in that menſtruum, brings over with it nothing conſiderable: the inſpiſſated extract retains, along with the bitterneſs and ſubaſtringency, nearly all the aromatic

Ol. eſſentiale rad. ſaſſafr. *Ph. Lond. & Ed.*

matter of the root, though the ſmell is in great part ſuppreſſed in the extract as well as in the tincture.

Saſſafras is uſed as a mild corroborant, diaphoretic, and ſweetener, in ſcorbutic, venereal, cachectic, and catarrhal diſorders. For theſe purpoſes, both the volatile and the fixt parts, the diſtilled oil and the watery extract, have been given with ſucceſs: the ſpirituous tincture or extract, which contain both, appear to be the moſt elegant preparations. Infuſions made in water, from the cortical or the woody part raſped or ſhaved, are commonly drank as tea: in ſome conſtitutions, theſe liquors, by their fragrance, are apt, on firſt taking them, to affect the head; an inconvenience, which is generally got the better of on continuing their uſe for a little time, and which neither the watery nor ſpirituous extracts are at all ſubject to.

SATUREIA.

SATUREIA hortenſis ſive cunila ſativa plinii C. B. Thymbra. Satureia hortenſis Linn. SUMMER SAVOURY: a low, ſhrubby, ſomewhat hairy plant: with ſmall oblong narrow leaves, narroweſt at the bottom, ſet in pairs; and ſmall cluſters, in the boſoms of the leaves, of pale purpliſh labiated flowers, whoſe upper lip is nipt at the extremity, the lower cut into three ſegments. It grows wild in ſome of the ſouthern parts of Europe, and is ſown annually in our culinary gardens.

THE leaves of ſavoury are a warm aromatic; of a grateful ſmell, like that of thyme but milder; and a penetrating pungent taſte. To rectified

rectified ſpirit, they give out the whole of their active matter, together with a dark green tincture: water receives from them a reddiſh brown colour, and a conſiderable ſmell, but very little of their taſte. In diſtillation with water, they yield a ſmall quantity of a fragrant eſſential oil, very pungent, and of great ſubtility and volatility: the remaining decoction, inſpiſſated, leaves a weakly bitteriſh, ſubaſtringent, ungrateful extract. Rectified ſpirit elevates in diſtillation much leſs than might be expected from the remarkable volatility of the oil: the extract ſmells agreeably, though weakly, of the ſavoury, and has a very warm, pungent, aromatic taſte.

SATYRION.

SATYRION Pharm. Edinb. Orchis morio mas foliis maculatis C. B. Cynoſorchis & teſticulus caninus quibuſdam. Orchis maſcula Linn. ORCHIS: a plant with ſix or ſeven long ſmooth narrow leaves, variegated with dark-coloured ſtreaks or ſpots, iſſuing from the root; and one or two embracing the ſtalk, which is ſingle, roundiſh, and ſtriated: on its top appears a long looſe ſpike of irregular, naked, purpliſh red flowers, conſiſting each of ſix petala; one of which is large, cut into three ſections, hanging downwards; the others ſmaller, forming a kind of hood above it, with a tail behind: the root conſiſts of two roundiſh whitiſh tubercles, about the ſize of nutmegs, one plump and juicy, the other fungous and ſomewhat ſhrivelled, with a few large fibres at the top. It is perennial, grows wild in ſhady grounds and moiſt meadows, and flowers in the beginning of May or ſooner.

THE

The plump roots or bulbs (the only part directed for medicinal uſe) have a faint ſomewhat unpleaſant ſmell, and a viſcid ſweetiſh taſte. They abound with a glutinous ſlimy juice, in virtue of which they have been found ſerviceable, like althea root and other mucilaginous vegetables, in a thin acrid ſtate of the humours and eroſions of the inteſtines. They have been celebrated alſo for aphrodiſiac virtues, to which they appear to have little claim.

The ſubſtance brought from the eaſtern countries under the names of *Salep*, *ſalleb*, and *ſerapias*, and recommended, like our orchis root, in bilious dyſenteries, defluxions on the breaſt, and as a reſtorative, appears to be no other than the prepared roots of ſome plants of the orchis kind, of which different ſpecies are ſaid to be taken indiſcriminately. The ſalep comes over in oval pieces, of a yellowiſh white colour, ſomewhat clear and pellucid, very hard and almoſt horny, of little or no ſmell, in taſte like gum tragacanth. The common orchis root, boiled in water, freed from the ſkin, and afterwards ſuſpended in the air to dry, gains exactly the ſame appearance: the roots thus prepared do not grow moiſt or mouldy in wet weather, which thoſe, that have been barely dried, are very liable to: reduced into powder, they ſoften or diſſolve as it were in boiling water into a kind of mucilage; which may be diluted, for uſe, with a larger quantity of water, or with milk.

* The following proceſs for the preparation of ſalep from the Engliſh orchiſes, by Mr. Moult, of Rochdale, is publiſhed in the *Philoſ. Tranſact.* vol. lix. "The new root is to be waſhed in water, and the fine brown ſkin which covers it is to be ſeparated by means of a ſmall bruſh, or by dipping the root in hot water,

water, and rubbing it with a coarſe linen cloth. When a ſufficient number of roots have been thus cleaned, they are to be ſpread on a tin plate, and placed in an oven heated to the uſual degree, where they are to remain ſix or ten minutes, in which time they will have loſt their milky whiteneſs, and acquired a tranſparency like horn, without any diminution of bulk. Being arrived at this ſtate, they are to be removed, in order to dry and harden in the air, which will require ſeveral days to effect; or by uſing a very gentle heat, they may be finiſhed in a few hours."

SAXIFRAGA.

SAXIFRAGA rotundifolia alba C. B. Saxifraga granulata Linn. WHITE SAXIFRAGE: a plant with kidney-ſhaped crenated yellowiſh-green leaves, and round ſlender purpliſh branched ſtalks, on the tops of which grow ſhort looſe ſpikes of pentapetalous white flowers, followed each by a two-horned capſule full of ſmall ſeeds: the root is compoſed of ſmall fibres, with a number of little tubercles among them, about the ſize of pepper-corns, containing under a chaffy covering, irregular whitiſh bodies ſomewhat brittle like the kernels of fruits. It is perennial, grows wild in ſandy paſture-grounds, and flowers in May: the leaves and ſtalks wither ſoon after flowering, and by degrees the tubercles of the roots alſo diſappear.

THE leaves of this plant, of little or no ſmell, and of a weak unpleaſant taſte; and the tubercles of the roots, improperly called ſeeds, of no ſmell, and in taſte ſweetiſh with a very ſlight acrimony; are recommended as aperients and

and diuretics, in obſtructions of the menſes, ſtranguries, and nephritic caſes. Among us, they have long been diſuſed, and unknown in the ſhops; a more common plant, of the ſame name, but of a different genus, and of more activity, having generally ſupplied their place, viz.

SAXIFRAGA VULGARIS.

SAXIFRAGA vulgaris ſive anglica, Hippomarathrum anglicum, Fœniculum erraticum: Seſeli pratenſe, ſilaus forte plinio C. B. Angelica pratenſis apii folio Tourn. Peucedanum Silaus Linn. ENGLISH or MEADOW SAXIFRAGE: an umbelliferous plant, with winged leaves ſubdivided into oblong narrow ſharp-pointed ſegments: the flowers are of a yellowiſh white colour, the umbel naked, but its ſubdiviſions have ſeveral little leaves at their origin; the ſeeds are ſhort, browniſh or reddiſh, plano-convex, with three deep furrows ſo as to appear winged: the root is long, about the thickneſs of the finger, browniſh or blackiſh on the outſide, and white within. It is perennial, common in meadows and paſture grounds, and flowers in June.

THE roots, leaves, and ſeeds of this plant have been commended as aperients, diuretics, and carminatives; and appear, from their aromatic ſmell, and moderately warm pungent bitteriſh taſte, to have a better claim to theſe virtues than the preceding ſaxifrage. They are rarely or never uſed.

SCAMMONIUM.

SCAMMONIUM Pharm. Lond. & Edinb. Diagrydium. SCAMMONY: the concrete gummy

my-resinous juice of the roots of a species of convolvulus *(convolvulus (scammonia) foliis sagittatis postice truncatis, pedunculis bifloris Linn.)* distinguished by the leaves being shaped like an arrow-head and having two semicircular notches at the bottom on each side of the footstalk, the flowers being of a pale yellowish colour and standing two on one stem: it is a native of Syria, and has been lately found to bear the colds of our own climate. The scammony is extracted in Syria, by baring the upper part of the root in June, cutting off the top obliquely, and placing a shell or some other receptacle at the depending part to receive the milky juice, which on standing concretes into solid masses.

The best scammony is brought from Aleppo, in light spongy masses, easily friable, glossy, of different shades of colour from a grey or yellowish white almost to black, when reduced to powder of a browniſh white colour. An inferiour sort comes from Smyrna, in compact hard ponderous pieces, full of sand and other impurities. Such should be chosen as crumbles the most easily betwixt the fingers, grows instantly white on the contact of watery moisture, and leaves little or no feces on being dissolved. Its colour in the mass affords no criterion of its purity or goodness.

Scammony has a slight unpleasant smell, and a weak bitterish subacrid taste. It consists of about equal parts of resinous and gummy matter, and hence dissolves almost totally in a mixture of equal parts of rectified spirit and water, that is, in proof spirit. Rectified spirit takes up the resin, with some part of the gum: if the tincture be inspissated a little, and then mixed with water, the gum continues dissolved, and the pure resin precipitates. By trituration with

with water, or by bare maceration, the ſcammony is reſolved into a milky liquor verging to greeniſh; which on ſtanding depoſites ſome portion of the reſin, but retains its milkineſs.

This gummy-reſin is one of the ſtrong ſtimulating cathartics; more kindly in operation, and hence in more general uſe, than moſt of the other ſubſtances of that claſs: the doſe is from two or three grains to twelve. Sundry ill qualities have been aſcribed to it, which it is not found to poſſeſs: and ſundry correctors have been deviſed, which it does not appear to want. In cold indolent ſerous habits, ſcammony itſelf procures generally a plentiful evacuation with great eaſe and ſafety: in inflammatory caſes, and the more irritable diſpoſitions, it is indeed dangerous; but no otherwiſe ſo than the reſt of the ſtrong purgatives; and no otherwiſe than by virtue of that power on which its efficacy in the oppoſite circumſtances depends.

By the ſmallneſs of the doſe of this medicine, its eaſy ſolubility, and its having little taſte, it is fitted for being commodiouſly taken in almoſt any form. It is made in the ſhops into a powder, with the addition of an equal weight of hard extract of jalap, and a fourth of its weight of ginger†; or with equal its weight of cryſtals of of tartar‡. It is likewiſe combined with aloes, and alſo with calomel, in different officinal powders. A ſcammoniate electuary is compoſed of one ounce of ſcammony, aromatiſed with half an ounce of cloves, half an ounce of ginger, and a ſcruple of the eſſential oil of caraway-ſeeds made up with ſyrup of roſes; of which compoſition, one dram and a half contain fifteen grains of the ſcammony§. Agreeable purging troches, for thoſe who are not eaſily

Pulvis e ſcammonio comp. † *Ph. Lond.* ‡ *Ph. Ed.*

Pulv. e ſcammon. cum aloe *Ph. Lond.* Pulv. e ſcammon. cum calom. *Ph. Lond.*

§ Electar. e ſcammonio *Ph. Lond.*

eaſily prevailed upon to take medicines of this kind in other forms, are prepared, by grinding together three drams of ſcammony, four drams of cryſtals of tartar, four drops of oil of cinnamon, and eight ounces of fine ſugar, and moiſtening the mixture with ſo much roſe-water as will render it of a due conſiſtence for being formed: each tablet is made to weigh about a dram†, and conſequently contains two grains and a half of ſcammony. One of the moſt elegant liquid preparations is a ſolution of the ſcammony in a ſtrong infuſion or decoction of liquorice, poured off from the feces, and aromatiſed with ſome grateful diſtilled water or aromatic tincture; as thoſe of cardamom-ſeeds.

† Morſuli purgantes *Ph. Brandenburgh.*

The dried root of the plant, as well as its juice, may perhaps deſerve ſome notice. Dr. Ruſſel, to whom the public is obliged for an accurate hiſtory of this drug, relates that a decoction of half an ounce of the root procured five ſtools, without gripes, ſickneſs, or any manner of uneaſineſs, and, on repeating the trial ſeveral times, had the ſame effect: and that the decoctions are entirely without ſmell, and in taſte rather ſweetiſh than diſagreeable. Neither the ſtalks, leaves, flowers, or ſeeds, ſeemed to have any purgative virtue *(a)*.

SCILLA.

SCILLA Pharm. Lond. & Edinb. Scilla radice alba, & ſcilla vulgaris radice rubra C. B. Ornithogalum maritimum Tourn. Scilla maritima Linn. SQUILL or SEA-ONION: a plant with a

(a) Medical obſervations and inquiries, by a ſociety of phyſicians in London.

large

large bulbous onion-like root; from which riſe, firſt a naked ſtalk bearing ſeveral hexapetalous white flowers, and afterwards large green lily-like leaves with a remarkable rib in the middle of each. It grows ſpontaneouſly on ſandy ſhores in Spain and in the levant, from whence we are annually ſupplied with the roots. They ſhould be choſen large, plump, freſh, and full of a clammy juice: ſome are of a reddiſh colour, and others white, but no difference is obſerved in the qualities of the two ſorts, and hence the college allows both to be taken promiſcuouſly.

THIS root is to the taſte very nauſeous, intenſely bitter, and acrimonious: much handled, it exulcerates the ſkin. Taken internally, it acts as a powerful attenuant and aperient: in doſes of a few grains it promotes expectoration and urine: in ſomewhat larger ones, it proves emetic and ſometimes purgative. It is one of the moſt certain diuretics in hydropic caſes, and expectorants in aſthmatic ones, where the lungs or ſtomach are oppreſſed by tenacious phlegm, or injured by the imprudent uſe of opiates.

This medicine, on account of its ungrateful taſte, is moſt commodiouſly taken in the form of pills; into which the dried root may be reduced, by beating it with thrice its weight each of ammoniacum and leſſer cardamom-ſeeds in powder, and extract of liquorice, and a ſufficient quantity of ſimple ſyrup† or one dram of dried ſquills may be mixed with three drams each of powdered ginger and ſoap, and two drams of ammoniacum, making up the maſs with ſyrup of ginger‡. In whatever form ſquills are given, unleſs when deſigned to act as

Pil. ſcilliticæ *Ph. Ed.* †

Pil. e ſcilla *Ph. Lond.* ‡

an

an emetic, the addition of ſome grateful aromatic material is of uſe, to prevent the nauſea which of themſelves they are very apt, even in ſmall doſes, to occaſion.

The freſh root loſes in drying about four fifths of its weight, without any conſiderable loſs of its taſte or virtue; the vapour which exhales appearing to be little other than merely aqueous. Hence four grains, which are the mean doſe of the dry root in powder, are equivalent to near a ſcruple of the freſh ſquill. The moſt convenient way of drying it is, after peeling off the outer ſkin, to cut the roots tranſverſely into thin ſlices (not to ſeparate the coats, as has been uſually directed) and expoſe them to a gentle warmth. Scilla exſiccata *Ph. Lond. & Ed.*

The ancients, in order to abate the acrimony of the ſquill for certain purpoſes, incloſed it (after ſeparating the ſkin, and the fibres at the bottom with the hard part from which they iſſue) in a paſte made of flour and water, and then baked it in an oven, till the paſte became dry, and the ſquill ſoft and tender throughout. The ſquill, ſo prepared, was beaten with two-thirds its weight of flour, the mixture formed into troches, and dried with a gentle heat. Theſe troches were ſuppoſed to be alexipharmac, and in this light were made an ingredient in theriaca. The virtues of the freſh ſquill may be preſerved by beating it with ſugar into a conſerve, in the proportion of one ounce of the ſquill to five ounces of fine ſugar. Scilla cocta. Troch. e ſcilla. Conſ. ſcillæ *Ph. Lond.*

Water, wine, proof ſpirit, and rectified ſpirit, extract the virtues both of the freſh and the dry root. The London college have directed a tincture in which two ounces of freſh dried ſquills are digeſted for eight days in a pint of proof ſpirit. Nothing riſes in diſtillation with Tinct. ſcillæ *Ph. Lond.*

any of these menstrua, the entire bitterness and pungency of the squill remaining concentrated in the inspissated extracts: the spirituous extract is in smaller quantity than the watery, and of a proportionably stronger almost fiery taste.

Alkalies considerably abate both the bitterness and acrimony of the squill: vegetable acids make little alteration in either, though the admixture of the acid taste renders that of the squill more supportable. These acids extract its virtue equally with watery or spirituous menstrua; and, as an expectorant in disorders of the breast, excellently coincide with it.

Acetum scillæ *Ph. Lond.* The college of London directs an acetous tincture to be prepared, by macerating a pound of the dry roots in six pints of vinegar, with a gentle heat: to the liquor pressed out, and after settling poured off from the feces, one twelfth its quantity of proof spirit is added, to prevent its growing soon foul.

Acetum scillit. *Ph. Ed.* The college of Edinburgh for the same preparation directs the proportions of two ounces of dried squills, two pounds and a half of distilled vinegar, and three ounces of rectified spirit.

Oxym. scil. lit. *Ph. Lond.* A scillitic oxymel is obtained by boiling a quart of the acetous tincture with three pounds of clarified honey, till the mixture acquires the consistence of a syrup: and a syrup of squills, by dissolving three pounds and a half of fine sugar in two pounds of the vinegar.

Syr. scillit. *Ph. Ed.*

These preparations are used, as expectorants, in doses of one, two, or three drams, along with cinnamon or some other grateful water: where the first passages are overloaded with viscid phlegm, an ounce or more is given at once, to procure a more speedy and effectual evacuation by vomit.

SCINCUS.

SCINCUS.

SCINCUS ſeu crocodilus terreſtris Raii. The SKINK: a ſmall amphibious animal, of the lizard kind, clothed with greyiſh ſcales, caught about the Nile, &c. and thence brought, dried, to us, remarkably ſmooth and gloſſy as if varniſhed. The fleſh of this animal, particularly of the belly, has been ſaid to be diuretic, alexipharmac, aphrodiſiac, and uſeful in leprous diſorders. Whatever virtues it may have when uſed freſh, as food, it is not expected to be of any importance as it comes to us, and ſerves only to increaſe the number of the articles of which mithridate is compoſed.

SCORDIUM.

SCORDIUM Pharm. Lond. & Edinb. C. B. Chamædrys paluſtris & triſſago paluſtris quibuſdam. Teucrium Scordium Linn. WATER-GERMANDER: a trailing plant, with oblong, oval, indented, ſoft hoary leaves, ſet in pairs, without pedicles: in their boſoms iſſue purpliſh monopetalous flowers, not above four or five together, each cut into five ſegments and followed by four ſmall ſeeds lodged in the cup. It is ſometimes found wild in watery places, but the ſhops are ſupplied chiefly from gardens: it is perennial, and flowers in June.

THE leaves of ſcordium, rubbed betwixt the fingers, yield a moderately ſtrong ſmell, ſomewhat of the garlic kind: to the taſte they diſcover a conſiderable bitterneſs and ſome pungency; but the aſtringent power, which ſome aſcribe to them, could not be diſtinguiſhed,

either by the taſte, or by ſolution of chalybeate vitriol. They are recommended as alexipharmacs and corroborants, in malignant and putrid diſorders, and in laxities of the inteſtines: they enter ſeveral officinal compoſitions in thoſe intentions, and are ſometimes employed externally in antiſeptic cataplaſms and fomentations.

On keeping the dry herb for ſome months, its ſmell is diſſipated; and the bitterneſs, thus diveſted of the flavouring matter, proves conſiderably leſs ungrateful than at firſt. The leaves, moderately and newly dried, give out their ſmell and taſte both to water and to rectified ſpirit; and tinge the former of a browniſh, the latter of a deep green colour. In diſtillation, their peculiar flavour ariſes with water; but the impregnation of the diſtilled fluid is not ſtrong, nor could any eſſential oil be obtained on ſubmitting to the operation ſeveral pounds of the herb: the remaining decoction, inſpiſſated, leaves a very bitter mucilaginous extract. Rectified ſpirit brings over little or nothing: the inſpiſſated extract partakes in a conſiderable degree of the flavour of the ſcordium, and proves in bitterneſs alſo far ſtronger than the watery.

SCORZONERA.

SCORZONERA latifolia ſinuata C. B. Viperaria & ſerpentaria hiſpanica quibuſdam. Scorzonera hiſpanica Linn. VIPERS-GRASS: a plant with large ſharp-pointed leaves, ſlightly ſinuated about the edges, having a large prominent rib in the middle, joined to the ſtalks without pedicles: on the tops of the branches grow yellow floſculous flowers, ſet in ſcaly cups, followed by oblong roundiſh ſtriated ſeeds winged with down: the root is long, ſingle, from the ſize of a gooſe

a goose-quill to that of the little finger, of a dark colour on the outside and white within. It is perennial, a native of Spain, and common in our culinary gardens.

The roots of scorzonera have been employed medicinally as alexipharmacs, and in hypochondriacal disorders and obstructions of the viscera; but at present are more properly looked upon as alimentary articles, in general salubrious, and moderately nutritious. They abound with a milky juice, of a soft sweetish taste, but which in drying contracts a slight bitterness. Extracts made from them by water are considerably sweet and mucilaginous: extracts made by rectified spirit have a less degree of sweetishness, accompanied with a slight grateful warmth. In Cartheuser's experiments, the spirituous extract amounted to one third the weight of the root, and the watery to above one half: as his watery extract, though in larger quantity than the spirituous, was nevertheless, like mine, sweeter, it should seem that the sweet matter of scorzonera is somewhat different, in regard to its solubility, from that of most of the other vegetable sweets that have been examined, the spirituous extracts having generally much the greatest sweetness.

SCROPHULARIA.

FIGWORT: a plant with square stalks; the leaves set in pairs, at distances, in opposite directions; the branches terminated by loose spikes of irregular, purple, helmet-shaped flowers; each of which is followed by a roundish pointed capsule, containing numerous small seeds in two cells. It is perennial.

1. SCROPHULARIA *nodosa fœtida C. B. Millemorbia quibusdam. Scrophularia nodosa Linn.* Common figwort or kernelwort: with the leaves somewhat heart-shaped and serrated about the edges; the roots long, thick, and full of knots and tubercles. It grows wild in woods and hedges, and flowers in July.

The roots and leaves of this plant have been celebrated both internally and externally, against inflammations, the piles, scrophulous tumours, and old ulcers. Their sensible qualities are, a rank smell somewhat like that of elder leaves but stronger, and a disagreeable bitterish taste. The anodyne and anti-inflammatory virtues, which they are reckoned to exert in external applications, are attributed in great part to the odorous matter, which is supposed to be somewhat of the narcotic kind: the root, which has less of this smell than the leaves, has been generally preferred for internal use. At present, they are both among us disregarded.

2. SCROPHULARIA *aquatica major C. B. Betonica aquatica. Scrophularia aquatica Linn.* Greater water figwort, water betony: with the leaves oblong, nearly oval, crenated about the edges; the stalks winged at the angles; the root composed of numerous white strings issuing from one head. It grows in watery places, and flowers in July.

The leaves of this species are recommended for the same purposes as those of the preceding, to which they have by some been preferred: in taste and smell, they are similar, but weaker. Mr. Marchant reports, in the Memoirs of the French Academy, that this plant is the same with the *iquetaia* of the Brazilians, celebrated as a specific corrector of the ill flavour of senna: on his

his authority, the Edinburgh college, in their common infuſion of that drug, directed two thirds its weight of the water of figwort leaves to be joined; but as they have now diſcarded this ingredient, we may preſume that it was not found to be of much uſe.

SEDUM.

SEDUM majus vulgare C. B. Aizoon & barba jovis quibuſdam. Sempervivum tectorum Linn. HOUSELEEK or SENGREEN: a plant with numerous, thick, ſtiff, fleſhy, pointed leaves, lying over one another in form of a roundiſh cluſter; in the middle of which riſes a ſtiff ſtalk, covered with ſmaller leaves, divided at the top into ſeveral branches, bearing purpliſh flowers with twelve petala, which are followed by the ſame number of capſules full of ſmall ſeeds. It is perennial and evergreen, grows on old walls and the tops of houſes, and flowers in June.

THE leaves of houſeleek, of no remarkable ſmell, diſcover to the taſte a mild ſubacid auſterity: their expreſſed juice, of a pale yelloviſh hue when filtered, yields on inſpiſſation a deep yellow, tenacious, mucilaginous maſs, conſiderably acidulous and acerb: from whence it may be preſumed, that this herb has ſome claim to the refrigerant and reſtringent virtues that have been aſcribed to it. It is obſervable that the filtered juice, on the addition of an equal quantity of rectified ſpirit of wine, forms a light white coagulum, like creme of fine pomatum, of a weak but penetrating taſte: this, freed from the fluid part, and expoſed to the air, almoſt totally exhales. From this experiment it is concluded by ſome that houſeleek

contains a volatile alkaline ſalt *(a)*: but the juice coagulates in the ſame manner with volatile alkalies themſelves, as alſo with fixt alkalies: acids produce no coagulation.

SELENITES.

SELENITES: an earthy or ſtony concrete; not diſſoluble in acids; calcining in a gentle heat into a ſoft powder†, which forms a tenacious paſte with water; compoſed of calcareous earth and vitriolic acid.

† Plaſter of Paris.

THE vitriolic acid, poured on crude calcareous earths, as chalk, limeſtone, marble, does not diſſolve or unite with them, at leaſt in any conſiderable degree: but if the earth be previouſly diſſolved in any other acid, the vitriolic acid, ſuperadded to this ſolution, abſorbs the diſſolved earth, and forms with it a concrete no longer ſoluble, which of courſe renders the liquor milky, and on ſtanding ſettles to the bottom, either in a powdery or cryſtalline form, according as the liquor was leſs or more diluted with water. Native mineral concretes of this kind, when pellucid and cryſtalline, are called *ſelenites*; when compoſed of a number of thin tranſparent coats or leaves, *lapis ſpecularis*, *Muſcovy glaſs*, or *iſinglaſs*; when in large ſtony maſſes, of a granulated texture, *gyſpum*; and when the maſſes are of a fibrous texture, *ſtriated gypſum* or *Engliſh talc*. All theſe ſubſtances are made to diſcover their compoſition, by ſtrongly calcining them in contact with the burning fuel: the inflammable principle of the coals abſorbs their vitriolic acid, from which combination is produced common

(a) Burghart, *Medicorum Sileſiacorum ſatyræ, ſpecim.* IV. *obſ.* ii. *p.* 11.

ſulphur,

ſulphur, greateſt part of which exhales; and the remaining calcined earth, thus deprived of the acid, is found to be a perfect quicklime.

This concrete, in its different forms, has been recommended as an aſtringent in fluxes and hemorrhagies; a virtue which agrees but ill with its indiſſolubility and want of taſte. It is often met with in the reſidua of waters, both of the common and medicinal ſprings.

SENNA.

SENNA Pharm. Lond. & Edinb. Folium orientale. SENNA: the leaf of an annual, woody, pod-bearing plant *(ſenna alexandrina ſive foliis acutis C. B. Caſſia (ſenna) foliolis trijugatis quadrijugatiſque Linn.)* brought dry from Alexandria in Egypt. It is of a lively yellowiſh green colour, an oblong ſomewhat oval figure, ſharp-pointed at the ends, about a quarter of an inch broad, and not a full inch in length. Some inferiour ſorts are brought from Tripoli and other places: theſe may be diſtinguiſhed by their being either narrower, longer, and ſharper pointed; or larger, broader, and round pointed, with ſmall prominent veins; or large, obtuſe, and of a freſh green colour without any yellow caſt.

SENNA is a moderately ſtrong, and in general a ſafe cathartic: Geoffroy ſpecifies hemorrhagies, inflammations of all kinds, and diſorders of the breaſt, as being almoſt the only exceptions to its uſe. The doſe in ſubſtance is from a ſcruple to a dram; in infuſion, from one dram to three or four. It gives out its virtue both to watery and ſpirituous menſtrua: to water and proof ſpirit it communicates a browniſh colour, more

more or leſs deep according to the proportions; to rectified ſpirit, a fine green. There are two inconveniences often complained of in this medicine, its being liable in moſt conſtitutions, to occaſion gripes; and its being accompanied with an ill flavour, which is apt to nauſeate both the ſtomach and the palate. The firſt may be greatly obviated by dilution, the latter by aromatic and other additions; ſeveral compoſitions of this kind are prepared in the ſhops, both ſufficiently palatable, and which operate for the moſt part with eaſe and mildneſs.

Inf. ſennæ ſimpl. *Ph. Lond.*

The moſt ſimple infuſion is that ordered by the London college, in which ſix drams of ſenna with half a dram of powdered ginger are directed to be macerated during an hour in half a pint of boiling water. For the acidulated infuſions, ſix drams of tamarinds, one of cryſtals of tartar, half a dram of coriander ſeeds, half an ounce of brown ſugar, and one, two or three drams of ſenna are infuſed in eight ounces of boiling water, in an unglazed earthen veſſel, for four hours, and then ſtrained. Or three drams of ſenna are infuſed in a quarter of a pint of boiling water, till the liquor has grown cold, with a dram of coriander ſeeds bruiſed, and half a dram of cryſtals of tartar, which laſt are previouſly boiled in the water till diſſolved; or with two drams of freſh lemon peel, and two drams by meaſure of lemon juice. The former committee of the London college obſerved, that this laſt was the moſt agreeable form, they had been able to contrive, for the exhibition of ſenna to thoſe who are more than ordinarily offended with its flavour; and that though acids are generally ſuppoſed to impede the action of water on vegetables, yet the infuſions of ſenna made with acids were found, from experience,

Infuſum tamarindorum cum ſenna *Ph. Ed.*

Infuſ. ſennæ tartariſat. *Ph. Lond.*

Infuſ. ſennæ limoniatum.

not

not to fail in their intention. Indeed if the acids really weaken the diſſolving power of the water, which it is probable they do in ſome degree, it ſhould ſeem to be, on this account, rather of advantage than otherwiſe; for, as the committee further obſerved, in a medicine very nauſeous to many, it is of primary conſequence that only the lighter and leaſt diſguſtful parts be extracted. On this principle, ſome macerate the ſenna for a night in cold water, which becomes ſufficiently impregnated with its purgative virtue, without extracting ſo much, as boiling water does, of the nauſeous matter: if the liquor, poured off from the ſenna, be boiled a little by itſelf, great part of its ill flavour will be diſſipated; and the remains of its offenſiveneſs may be covered by infuſing in it ſome bohea tea. If the coction is continued for any conſiderable time, the purgative virtue of the ſenna will be diminiſhed; for the inſpiſſated watery extracts are ſcarcely found to purge ſo much, as one fourth of the infuſion or decoction they were made from, or ſo much as an equal weight of the leaves in ſubſtance. The London college have now admitted an extract of this kind. Extr. ſennæ *Ph. Lond.*

The officinal ſpirituous tinctures of ſenna are prepared by digeſtion for ſome days, in proof ſpirit. The proportions, in the London pharmacopœia, are three ounces of ſenna to a quart of the ſpirit, to which are added four ounces of ſtoned raiſins, three drams of caraway ſeeds, and one dram of leſſer cardamom ſeeds huſked: in the Edinburgh, two ounces of ſenna to three pounds and an half of the ſpirit, with the addition of one ounce of jalap, half an ounce of coriander ſeeds, and four ounces of white ſugar-candy in powder, which laſt is directed to be diſſolved in the tincture after ſtraining it from the Tinctura ſennæ *Ph. Lond.* Tinct. ſennæ comp. vulgo elixir ſalutis *Ph. Ed.*

the other ingredients. Both theſe tinctures are agreeable and uſeful carminative purgatives, eſpecially to thoſe who have accuſtomed themſelves to ſpirituous liquors: the ill flavour of the ſenna is in great meaſure covered, and its offending the ſtomach or producing gripes prevented, by the warm ſeeds and the ſweets. Several compoſitions of this kind have been offered to the public, under different names; the two above are inferiour to none; and ſuperiour to moſt of them.

SERPENTARIA.

SERPENTARIA VIRGINIANA Pharm. Lond. & Edinb. Serpentaria virginiana & Viperina & Colubrina virginiana Pharm. Pariſ. VIRGINIAN SNAKEROOT: the root of a ſpecies of ariſtolochia growing in Virginia and Carolina, *ariſtolochia (ſerpentaria) foliis cordatis oblongis planis, caulibus infirmis flexuoſis teretibus, floribus ſolitariis Linn.* The root is ſmall, light, buſhy, compoſed of a number of ſtrings or fibres iſſuing from one head and matted together, of a browniſh colour on the outſide, and paler or yellowiſh within.

SNAKEROOT has an aromatic ſmell, approaching to that of valerian, but more agreeable, and a warm bitteriſh pungent taſte, which is not eaſily concealed or overpowered by a large admixture of other materials. It gives out its active matter both to water and rectified ſpirit, and tinges the former of a deep brown, the latter of an orange colour. Greateſt part of its ſmell and flavour is carried off in evaporation or diſtillation by both menſtrua: along with water there ariſes, if the quantity of the root ſubmitted

ſubmitted to the operation be large, a ſmall portion of a pale-coloured eſſential oil, of a conſiderable ſmell, but no very ſtrong taſte, greateſt part of the camphorated pungency, as well as bitteriſhneſs of the root, remaining in the inſpiſſated extract. The ſpirituous extract is ſtronger than the watery; not ſo much from its having loſt leſs in the evaporation, as from its containing the active parts of the root concentrated into a ſmaller volume; its quantity amounting only to about one half of that of the other.

This root is a warm diaphoretic and diuretic. It is reckoned one of the principal medicines of the alexipharmac kind; and as ſuch is in general uſe, in low malignant fevers and epidemic diſeaſes, for raiſing the pulſe, promoting a diaphoreſis, and correcting a putrid diſpoſition of the humours. It is given, in ſubſtance, from a few grains to a ſcruple or half a dram; in decoction or infuſion, to a dram and upwards. Tinctures of it are prepared in the ſhops, by macerating three ounces of the root in a quart of proof ſpirit†, or two ounces, with one dram of cochineal, in two pounds and a half of the ſame ſpirit ‡. Tinctura ſerpentariæ

† *Ph. Lond.*
‡ *Ph. Ed.*

SESELI.

LIGUSTICUM quod ſeſeli officinarum C. B. Laſerpitium Siler Linn. HARTWORT or SERMOUNTAIN: a tall umbelliferous plant, with large leaves, compoſed of oblong pointed ſections ſet in pairs or three together: the entire umbel, and its ſubdiviſions, have a circle of little leaves at their origin: the ſeeds are large, of a pale brown colour, oblong, flat on one ſide, convex and ſtriated on the other,

other, and edged with a leafy margin: the root is large, thick, and branched. It is perennial, grows wild in ſome of the ſouthern parts of Europe, is raiſed with us in gardens, and flowers in June.

BOTH the ſeeds of this plant, which are the part directed in our pharmacopœias, and the roots, appear to be uſeful aromatics, though not regarded in practice; of an agreeable ſmell, and a warm glowing ſweetiſh taſte. The roots have the greateſt warmth and pungency: the ſeeds, the greateſt ſweetneſs and the moſt pleaſant flavour. A ſpirituous extract of the ſeeds is a very elegant aromatic ſweet.

SESELI MASSILIENSE.

SESELI MASSILIENSE fœniculi folio C. B. Fœniculum tortuoſum J. B. Seſeli tortuoſum Linn. HARTWORT OF MARSEILLES: a large ſpreading branched umbelliferous plant; with the ſtalk and branches firm, woody, knotty, and variouſly bent; the leaves finely divided, like thoſe of fennel, but ſomewhat thicker, ſhorter, ſtiffer, and more diſtant from one another; the ſeeds alſo in ſhape like thoſe of fennel, and of a pale grey colour. It is perennial, and a native of the ſouthern parts of Europe, from whence the ſeeds are ſometimes brought to us.

THE ſeeds of this plant have an agreeable aromatic ſmell, and a very warm biting taſte: they are more pungent than thoſe of the foregoing ſeſeli, but want their ſweetneſs.

SIGILLUM

SIGILLUM SALOMONIS.

CONVALLARIA seu Sigillum Salomonis Ph. Edinb.(a) Polygonatum latifolium vulgare C. B. Convallaria multiflora Linn. SOLOMONS-SEAL: a plant with unbranched ſtalks, bearing oval narrow leaves ribbed like thoſe of plantain, generally all on one ſide: on the other ſide hang oblong monopetalous white flowers, two or more together, on long pedicles, followed each by a black berry: the root is white, thick, fleſhy, with ſeveral joints, and ſome flat circular depreſſions ſuppoſed to reſemble the ſtamp of a ſeal. It is perennial, grows wild in woods, and flowers in May.

THE roots of Solomons-ſeal are recommended externally as reſtringents; and internally as incraſſants and mild corroborants. They have little or no ſmell; to the taſte they diſcover a conſiderable ſweetneſs and viſcidity, followed by a very ſlight impreſſion of bitteriſhneſs and acrimony, which is diſſipated by boiling. It is ſaid that they have been uſed with ſucceſs in the hæmorrhoids *(b)*. The flowers, berries, and leaves, are acrid and poiſonous *(c)*.

SIMAROUBA.

SIMAROUBA Pharm. Lond. & Edinb. the bark of the *Quaſſia Simarouba, Linn. ſuppl. Quaſſia dioica, Pharm. Suec. Evonymus fructu nigro tetragono Barrer. Æquin.* It is brought from Guiana, in long pieces, of a yellowiſh

(a) The Edinburgh college give the *Convallaria Polygonatum* of Linnæus as their ſpecies.

(b) Cullen, *Mat. Med.* *(c)* Id.

white

white colour, light, tough, and of a fibrous texture.

Mr. de Juſſieu reports, that this bark is of common uſe in Guiana, againſt dyſenteric fluxes, and was brought from thence into Europe in the year 1713: that the fluxes which, in France, ſucceeded the exceſſively hot ſummer of 1718, and which not only reſiſted, but were aggravated by, purgatives, aſtringents, and ipecacoanha, happily yielded to ſimarauba: that decoctions of an ounce or half an ounce in a ſmall quantity of water, the doſe uſed by the natives of Guiana, occaſioned often vomiting, almoſt always uneaſy ſweats, and ſometimes an increaſe of the bloody and ſerous diſcharges by ſtool; but that a decoction of two drams in a quart of water, boiled to the conſumption of one third, divided into four doſes, and taken warm at intervals of three hours, abated the pain in one day, and when continued for a ſhort time completed the cure, without producing any nauſea or diſturbance: that it is not accompanied with the ill effects of aſtringents: that it abates ſpaſmodic and hyſteric ſymptoms: that it anſwers beſt in fluxes of the ſeroſo-bilious, bloody and mucous kind, ſupported by a convulſive motion of the inteſtines, where there is no fever, where the functions of the ſtomach are unhurt, and in teneſmi *(a)*. Dr. Degner likewiſe made uſe of this bark in the above form, with good ſucceſs, after proper evacuations, in an epidemic putrid dyſentery, which raged at Nimeguen during the ſummer and autumn of 1736: he ſays it acted mildly

(a) Mem. de l'acad. des ſcienc. de Paris, 1729. Geoffroy, *mat. med.* ii. 211.

and

and almoſt inſenſibly, and that its effects were ſpeedier in bloody than in bilious diſcharges: he takes notice alſo that the barks procured under the name of ſimaruba, in different parts of Holland, from Leipſick, and from Paris, differed greatly in quality from one another; but does not mention what the differences were, nor the qualities of the genuine or beſt ſort *(a)*.

The ſimaruba, which I have met with in our ſhops, has a moderately ſtrong, durable, not very ungrateful bitter taſte, without ſmell, and without any manifeſt aſtringency. Macerated in water, or in rectified ſpirit, it quickly impregnates both menſtrua with its bitterneſs, and with a yellow tincture. It ſeems to give out its virtue more perfectly to cold than to boiling water; the cold infuſion being rather ſtronger in taſte than the decoction; which laſt, of a tranſparent yellow colour whilſt hot, grows turbid and reddiſh brown as it cools. The milky appearance, which Juſſieu ſays it communicates to boiling water, I have not obſerved in the decoction of any of the ſpecimens I examined.

SINAPI.

SINAPI Pharm. Lond. Sinapi album Pharm. Edinb. Sinapi rapi folio C. B. Sinapis nigra Linn. (b).* MUSTARD: an annual plant; with long rough leaves divided to the rib into irregular ſegments, of which the extreme one is

(a) Hiſt. dyſenteriæ bilioſo-contagioſæ, in Append. ad act. nat. curioſ. vol. V.

* *(b)* The *Sinapis alba Linn.* is the Edinburgh ſpecies, which differs little from the black, or common, except in being leſs pungent and bitter. It ſhould ſeem therefore to be leſs proper for external uſe, at leaſt.

largeſt; producing, at the tops of the branches, tetrapetalous yellow flowers, followed, each, by a ſhort, ſmooth, quadrangular pod, divided longitudinally by a membrane which projects at the ends, containing ſmall, roundiſh, reddiſh-brown or dark-coloured ſeeds. It is a native of England, but commonly cultivated for medicinal and dietetic uſe.

Mustard seed is one of the ſtrongeſt of the pungent, ſtimulating, diuretic medicines that operate without exciting much heat. It is ſometimes taken, unbruiſed, to the quantity of a ſpoonful at a time; in paralytic, cachectic, and ſerous diſorders. In this manner of exhibition it generally opens the body; whereas the powder is apt to occaſion vomiting, in which intention it is ſometimes given diffuſed in warm water, of which repeated draughts muſt be drunk, to continue the effect. It is applied alſo, as an external ſtimulant, to benumbed or paralytic limbs; to parts affected with fixt rheumatic pains; and to the ſoles of the feet, in the low ſtage of acute diſeaſes, for raiſing the pulſe: in this intention, a mixture of equal parts of the powdered ſeeds and crumb of bread, with the addition, ſometimes, of a little bruiſed garlick, are made into a cataplaſm with a ſufficient quantity of vinegar.

Muſtard ſeed yields upon expreſſion a conſiderable quantity of oil, which is by ſome recommended externally againſt rheumatiſms and palſies, though it has nothing of that quality by which the ſeeds themſelves prove uſeful in thoſe diſorders; the oil being mild and inſipid as that of olives, and the pungency of the ſeed remaining entire in the cake left after the expreſſion.

expreſſion. Nor is any conſiderable part of the pungent matter extracted by rectified ſpirit; the tincture, which is of a pale amber colour, having very little taſte; and the extract, obtained by inſpiſſating it, being only bitteriſh and oily: the quantity of extract is about one ſixteenth the weight of the ſeeds. The bruiſed ſeeds give out readily to water nearly the whole of their active matter: added to boiling milk, they curdle it, and communicate their pungency to the whey. Diſtilled with water, they yield a limpid eſſential oil, extremely pungent and penetrating both in ſmell and taſte, and ſo ponderous as to ſink in the aqueous fluid: the remaining decoction, thus diveſted of the principle in which alone the acrimony of the muſtard reſides, leaves on being inſpiſſated a ſweetiſh mucilaginous extract.

*SIUM.

WATER-PARSNEP. A genus of umbelliferous plants, growing in watery ſituations, with winged leaves, ſtriated ſeeds, and a polyphyllous involucrum. Of theſe, a ſpecies has of late years come into frequent uſe under the name of *Sium aquaticum*, but this appellation equally ſuiting the three Engliſh kinds, it was a matter of doubt which of them was intended, and different opinions were given by botaniſts. The London college have at length determined the point by admitting into their catalogue the

SIUM NODIFLORUM *Linn.* CREEPING WATER-PARSNEP, which is diſtinguiſhed from the others by the reclining poſition of the leaves, and by the manner in which the umbels of flowers come out, chiefly from the axillæ of the leaves.

It is a very common plant, often entirely covering the bottom of ditches. In cutaneous eruptions, and the caſes termed ſcorbutic, the expreſſed juice of the water-parſnep has been given in the doſe of three large ſpoonfuls twice a day to children, and three or four ounces every morning to adults, with great advantage. It is not nauſeous, and is readily taken by children when mixed with milk. In theſe doſes, it has no ſenſible effect on the head, ſtomach, or bowels.*(a)*

SOLANUM.

NIGHTSHADE: a plant with a monopetalous flower, divided into five ſegments, having its cup divided in the ſame manner, with the ſame number of ſtamina in the middle, and followed by a juicy berry.

1. BELLADONNA *Pharm. Edinb. & Pariſ. Solanum melanoceraſos C. B. Solanum lethale. Atropa Belladonna Linn.* Deadly nightſhade or dwale: with the leaves oval, pointed, ſomewhat hairy; the flowers ſolitary in the boſoms of the leaves, of a dull purpliſh colour, tubulous, ſlightly cut, with the ſtamina ſeparate from one another; the berries of a gloſſy black. It is perennial, grows wild in ſome ſhady waſte grounds, and flowers in July.

2. SOLANUM *Pharm. Pariſ. Solanum officinarum C. B. Solanum nigrum Linn.* Garden nightſhade: with the leaves oval, pointed, having generally ſome irregular indentations; the flowers in cluſters, white, not tubulous,

(a) Dr. Withering in the *Botan. Arrangement, ſecond edit. p.* 293.

deeply

deeply cut, the ſegments ſpread out, and the tips of the ſtamina united into one button; the berries black. It is annual, grows ſpontaneouſly in cultivated grounds, and flowers in Auguſt.

The leaves of theſe plants have a faint ſmell, ſomewhat of the narcotic kind, which in drying is diſſipated: on the organs of taſte, whether freſh or dry, they make ſcarcely any impreſſion. Their effects are nevertheleſs very powerful: in external applications, they are ſaid to act as refrigerants, reſolvents, and diſcutients: taken internally, in the quantity of not many grains, they are highly deleterious, the firſt ſomewhat the moſt ſo. In very ſmall doſes, as an infuſion in boiling water of half a grain or a grain of the dried leaves, they occaſion a warmth over the whole body; which is often followed by a ſweat, or an increaſe of the urinary diſcharge, or ſome looſe ſtools, or a ſickneſs and vomiting; and often by a headach, giddineſs, dimneſs of the ſight, and other paralytic ſymptoms *(a)*. In ſome cancerous, ulcerous, and hydropic caſes, theſe infuſions have been repeated, at bed-time, every two or three nights or oftener, and the quantity of the leaves in each doſe increaſed gradually to five or ſix grains or more, with apparent benefit: but they are ſo variable and irregular in their operation, and ſo liable, not only

(a) Mr. Ray gives an account, from his own knowledge, of a pretty remarkable effect of a ſmall piece *(particula)* of a freſh leaf of belladonna applied externally to a little ulcer, ſuppoſed cancerous, below the eye: the uvea became in one night ſo relaxed, that it loſt all power of contracting the pupil, which, though expoſed to the ſtrongeſt light, continued dilated to four times its natural ſize, till the leaf being removed the parts gradually recovered their tone. The application was repeated three ſeveral times, and produced always the ſame effect. *Hiſt. plant.* 680.

to fail of giving relief, but to be productive of very alarming ſymptoms by ſtrongly affecting the nervous ſyſtem, that their uſe is deſervedly laid aſide. Their good effects, when they happen to prove medicinal, ſeem to depend, not on any alterative or peculiarly deobſtruent power, but merely on the evacuations they produce: where they do not act as evacuants, they generally aggravate they complaints *(a)*.

* In the *Med. Comment.* vol. i. p. 419, is a remarkable caſe of the efficacy of an external application of belladonna in diſcuſſing a ſcirrhous tumour in the rectum, near the anus, which almoſt totally blocked up the paſſage. The mode of application was a poultice of the root boiled in milk. This was applied to the anus and perinæum, and renewed morning and evening. In the ſpace of a month it entirely diſſolved the tumour, without any ſuppuration, or diſcharge of matter. The writer ſays that he could add more inſtances of the good effects of this plant externally applied.

The roots and berries appear to partake of the deleterious qualities of the leaves, though probably in different degrees: the berries in particular ſeem to be of much leſs activity. It is ſaid that three or four of the berries of the deadly nightſhade, which are reckoned more virulent than thoſe of the other ſort, have been ſometimes eaten without injury: Geſner reports that there expreſſed juice, boiled with a little ſugar to the conſiſtence of a ſyrup, proves, in doſes of a tea-ſpoonful, an effectual and ſafe anodyne, but gives a particular caution not to exceed this

(a) See Mr. Gataker's *obſervations* (and *the ſupplement* thereto) *on the internal uſe of the nightſhade*, and Mr. Bromfield's *account of the Engliſh nightſhades and their effects*.

doſe;

doſe. The Edinburgh college has directed the inſpiſſated juice of the leaves to be kept as an officinal. Succus ſpiſſatus belladonnæ *Pb. Ed.*

3. DULCAMARA *Pharm. Edinb. Solanum ſcandens ſeu dulcamara C. B. Amaradulcis & glycypicros quibuſdam. Solanum Dulcamara Linn.* Woody nightſhade or bitterſweet: with ſeveral of the leaves, particularly the upper ones, cut deeply into three ſections, or rather furniſhed with two ſmaller appendages at the bottom; the flowers in cluſters, of a blue colour, with the ſegments ſpread out and the ſtamina united as in the ſecond ſpecies; the berries red. It grows by the ſides of ditches and in moiſt hedges, climbing upon the buſhes, with winding, woody, but brittle ſtalks. It is perennial, and flowers in June and July.

The roots and ſtalks of this ſpecies impreſs, on firſt chewing them, a conſiderable bitterneſs, which is ſoon followed by an almoſt honey-like ſweetneſs. They have been commended in different diſorders, as high reſolvents and deobſtruents: their ſenſible operation is by ſweat, urine, and ſtool; the doſe from four to ſix ounces of a tincture made by digeſting four ounces of the twigs in a quart of white wine. Experience has ſhewn, that they are by no means equally deleterious with the two preceding nightſhades; that they act more regularly and uniformly: and that, without producing nervous complaints, they produce more conſiderable evacuations, eſpecially by ſtool; but their virtues in particular caſes have not yet been ſufficiently aſcertained.

*In a medical diſſertation on this plant, printed at Upſal, a light decoction and infuſion of the ſtalks is the preparation recommended,

and is said to have been frequently employed with success in violent ischiadic and rheumatic pains. The efficacy of the dulcamara in the jaundice, scurvy, suppressed menses, and the lues venerea, is also mentioned from other authors.

SPERMA CETI.

SPERMA CETI Pharm. Lond. & Edinb. Spermaceti, improperly so called: a species of fat; found in certain wales, particularly in their heads; artificially purified, by boiling with alkaline lye, to a snowy whiteness; and afterwards broken into flakes. It differs from the other animal fats, in not being dissoluble by alkalies or combinable with them into soap; and in rising almost totally in distillation, not in form of a fluid oil, but in that of a butyraceous matter resembling, both in consistence and smell, the butter of wax. In long keeping, it is apt to turn yellow and rancid: the matter, very small in quantity, which has suffered this change, and which taints the rest, is found to have lost the discriminating characters of the spermaceti; being dissoluble both by alkaline lye and by vinous spirits, so as to leave the remainder white and sweet as at first.

This concrete, of a soft butyraceous taste and no remarkable smell, is given with advantage in tickling coughs, in dysenteric pains and erosions of the intestines, and in such cases in general as require the solids to be softened and relaxed, or acrimonious humours to be obtunded. It readily dissolves in oils, and unites by liquefaction with wax and resins; and in these forms is applied externally. For internal

nal uſe, it may be diſſolved in aqueous liquors into the form of an emulſion, by trituration with almonds, the yolk or white of an egg, and more elegantly by mucilages; or made into a lohoch with proper additions.

* *SPIGELIA.*

SPIGELIA Pharm. Lond. & Edinb. Anthelmia Dris. Lining. Spigelia marilandica Linn. Periclymeni virginiani flore coccineo planta marilandica, ſpica erecta, foliis conjugatis Cateſby carol. INDIAN PINK: this plant has a perennial fibrous root, whence riſe ſingle ſtems, beſet with oppoſite oval-lanceolate, entire leaves, and crowned with a ſpike of tubular monopetalous red flowers, with five ſtamina and one piſtil. Each flower is ſucceeded by two round united byvalvular capſules, containing ſeveral ſmall ſeeds. It grows ſpontaneouſly in South Carolina, and other ſouthern provinces of North America.

The uſe of the root of this plant as an anthelmintic was communicated from the native Indians to the coloniſts, and it has ſince been much employed in that country. The firſt account of its virtues is to be met with in a paper of Dr. Lining's, in vol. i. of the *Eſſays Phyſical and Literary*; and Dr. Garden has confirmed it in vol. iii. of the ſame publication, and has given a figure and particular deſcription of the plant.

The root is given both in powder and infuſion; but the powder is eſteemed moſt efficacious. The doſe is not accurately aſcertained, but extends from twelve to ſixty or ſeventy grains of the powder. It is found to be moſt efficacious when it purges, which it does not always do without ſome additions. The exhibition

bition of a vomit previous to the uſe of the Indian pink has proved very ſerviceable. It ſometimes produces diſagreeable effects on the nervous ſyſtem, ſuch as giddineſs, dimneſs of the ſight, and convulſive motions of the muſcles of the eye. Theſe, according to Dr. Garden, are more likely to happen from a ſmall doſe than a large one, the latter more certainly proving purgative or emetic. Dr. Lining, on the other hand, repreſents theſe effects as conſequent upon too large a doſe. It is ſaid to act powerfully as a ſedative in abating the exacerbations of low remittent worm-fevers.

SPINA CERVINA.

SPINA CERVINA Pharm. Lond. Rhamnus catharticus ſive Spina cervina Pharm. Edinb. Rhamnus catharticus C. B. & Linn. Spina infectoria et cerviſpina quibuſdam. BUCKTHORN: a prickly buſh, or low tree, common in hedges: with oval pointed leaves; producing in June ſmall greeniſh flowers; and about the beginning of October ripening its black berries, which contain a dark green juice, with four ſeeds in each. The berries of the black alder and dogberry tree, which are frequently, in our markets, mixed with or ſubſtituted for thoſe of buckthorn, may be diſtinguiſhed, by their juice having no greenneſs, and by their containing only one or two ſeeds.

BUCKTHORN BERRIES have a faint unpleaſant ſmell, and a bitteriſh, acrid, nauſeous taſte. They operate briſkly by ſtool; and occaſion, at the ſame time, a thirſt and dryneſs of the mouth and throat, and not unfrequently ſevere gripes, eſpecially if water-gruel or other ſoft diluents

diluents are not freely drank ſoon after taking them. The doſe is ſaid to be, about twenty of the freſh berries in ſubſtance; twice or thrice that number in decoction; a dram, or a dram and a half, of the dried berries; an ounce of the expreſſed juice; or half an ounce of the rob or extract obtained by inſpiſſating the juice. Among us they have been employed only in the form of a ſyrup, in which they ſeem to operate leſs unkindly than in any other, and which is given by itſelf in doſes of three or four ſpoonfuls, or mixed in ſmaller quantities with other cathartics. The college of Edinburgh directs the ſyrup to be prepared by boiling the depurated juice with ſugar to a due conſiſtence: that of London adds a little ginger, and pimento, with a view to cover in ſome degree the ill flavour of the buckthorn: but notwithſtanding this improvement of the medicine, it is ſtill ſo unpleaſant and ſo churliſh, that it has now almoſt fallen into diſuſe.

Syrupus ſpinæ cervinæ *Ph. Lond.* & *Ed.*

SPIRITUS VINOSUS.

VINOUS SPIRIT; an inflammable fluid, obtained by diſtillation from wines or other fermented liquors. As firſt diſtilled, it partakes both of the phlegm or watery part, and of the oil, of the fermented liquor; which oil, in the liquors commonly uſed for this purpoſe, is nauſeous and fetid.

1. SPIRITUS VINOSUS RECTIFICATUS *Pharm. Lond.* & *Edinb.* Rectified ſpirit of wine: a vinous ſpirit purified as much as poſſible both from its phlegm and ill ſmell.

Spirits drawn from wine, ſuch as French brandy, may be in great meaſure purified by ſimple

ſimple diſtillation, in tall veſſels, with a gentle heat, the pure ſpirituous part riſing before the phlegm: if French brandy be thus diſtilled to one half, the diſtilled ſpirit proves tolerably pure. But wine or brandy being in this country too dear an article for diſtillation; and all vinous ſpirits, when perfectly purified, being one and the ſame thing; this purification is chiefly practiſed, among us, on the cheaper ſpirits of melaſſes and malt liquors. Theſe ſpirits, when freed by diſtillation from greateſt part of their phlegm, are ſtill found, particularly the latter, to abound with a very offenſive oil. To ſeparate this, they are mixed with equal their quantity of ſpring water, and the ſpirit gently drawn off again: a conſiderable portion of the oil is thus left behind in the water, which now proves turbid, and milky, and very nauſeous both in ſmell and taſte. By repeating this ablution with freſh quantities of water, the fouleſt and moſt offenſive ſpirits may be purified from all ill flavour.

Though ſpirits, by this treatment, may be diveſted of their oil, they cannot be freed wholly from phlegm; the gentleſt heat, in which they can be diſtilled, being ſufficient to raiſe a little watery vapour. To complete the purification, therefore, a little fixt alkaline ſalt, thoroughly dried and powdered, is added; which, imbibing the phlegm, is thereby diſſolved into a ponderous liquid, that does not mingle with the ſpirit, but ſettles at the bottom. If the ſpirit is very phlegmatic, four pints will require a pound of the alkali: if the diſtillation has been performed with due care, half this quantity, or leſs, will be ſufficient: in either caſe, if all the ſalt diſſolves, the ſpirit is to be digeſted with a little more, till at leaſt a part remains

remains undiſſolved. The ſpirit, now poured off, is to be again diſtilled, in order to ſeparate from it a portion of the ſalt, which has united with it, and which, though extremely minute, is ſufficient to vary, in ſome reſpects, its qualities. As ſome particles of the alkali are apt to be carried up with it even in the diſtillation, ſo as to communicate an ill flavour, it is adviſable to previouſly add a ſmall portion of calcined vitriol or burnt alum, which will completely abſorb the alkali, without giving any new impregnation to the ſpirit. In this manner was prepared the ſpirit uſed in the experiments of the preſent work under the name of rectified or pure ſpirit of wine.

Vinous ſpirits, thus rectified, have a very hot pungent taſte, without any particular flavour. They readily take fire, and burn totally away, without leaving any mark of an aqueous moiſture behind; though on catching the vapour that exhales from the flame, a conſiderable quantity of mere water is collected. On diſtilling them with the gentleſt heat, the laſt runnings prove as colourleſs, flavourleſs, and inflammable, as the firſt. They diſſolve diſtilled vegetable and animal oils, and all the pure reſins, into an uniform tranſparent fluid. They are the lighteſt of almoſt all known liquids: expreſſed oils, which ſwim on water, ſink freely in theſe to the bottom: a meaſure which holds ten ounces by weight of water, will contain little more than eight and a quarter of pure ſpirit.

2. SPIRITUS VINOSUS TENUIOR *Pharm. Lond. & Edinb.* Proof ſpirit: the ſame ſpirit containing an admixture of an equal quantity [by meaſure] of water. "The beſt proof ſpirit is "that

"that distilled from French wine; but for "common uses, may be employed the spirit "drawn from the syrupy matter which separates "in the purification of sugar, commonly called "melasses†."—The spirits usually met with, under the name of proof, are those distilled from different fermented liquors, freed from their phlegm and their flavour only to a certain degree. Their purity, with regard to flavour, may be judged by the taste, especially if the spirit be first duly diluted: of their strength, or the proportion of phlegm contained in them, the least uncertain criterion seems to be their gravity, which is estimated most commodiously by the hydrometer. For the nicer purposes, a pure flavourless proof spirit may be obtained by mixing the foregoing rectified spirit with an equal measure of pure water.

† *Ph. Lond.*

Alkohol *Ph. Lond.*

* The last London pharmacopœia has given three forms of vinous spirit. The purest is their *alkohol*, made by digesting rectified spirit of wine with hot fixed alkali, and then redistilling. Of this, the specific gavity to water is stated at 815 to 1000. Their rectified spirit has 95 parts of alkohol, and 5 of water, in 100 parts; and should have the specific gravity of 835 to 1000. Their proof spirit contains 55 parts of alkohol, to 45 of water, and weighs as 930 to 1000.

Rectified spirit coagulates all the fluids of animal bodies, that have been tried, except bile and urine. It hardens the solid or consistent parts, and preserves them from corruption. Applied externally to living animals, it strengthens the vessels, contracts the extremities of the nerves, and deprives them of sensibility: hence its power of restraining hemorrhagies, abating superficial

ſuperficial pains, &c. Received into the ſtomach, undiluted, it produces the like effects; thickening the fluid, and contracting all the ſolid parts which it touches, and deſtroying, at leaſt for a time, their uſe and office: if the quantity taken is conſiderable, a palſy, or apoplexy, follows, and ſpeedily proves mortal.

Proof ſpirits, and ſuch as are diluted below the proof ſtrength, have the ſame effects in a lower degree. Externally they are of uſe in corroborant, anodyne, and antiſeptic fomentations. Taken inwardly, in ſmall quantity, they ſtrengthen lax fibres, incraſſate thin fluids, and warm the habit: in larger quantity, they diſorder the ſenſes, deſtroy voluntary motion, and produce, like the rectified ſpirit, a mortal apoplexy or palſy.—Vinous ſpirits, therefore, in ſmall quantity and properly diluted, may be applied to uſeful purpoſes in the relieving of ſome diſorders; whilſt in larger ones, or imprudently continued, they act as a poiſon of a particular kind. Their moderate uſe is the moſt ſerviceable to thoſe, who are expoſed to heat and moiſture, to corrupted air, or other cauſes of colliquative and putrid diſeaſes; the moſt pernicious in the oppoſite circumſtances, and to thoſe who are afflicted with hyſterical or hypochondriacal complaints; for whatever temporary relief theſe ſpirituous cordials may afford in the lowneſſes to which hyſterical and hypochondriacal perſons are ſubject, we entirely agree with Dr. Pemberton, that there are none who feel ſo ſoon the ill effects ariſing from their habitual uſe.

SPONGIA.

SPONGIA.

SPONGIA Pharm. Lond. & Edinb. SPONGE: a ſoft, light, very porous and compreſſible ſubſtance, readily imbibing water; found in the ſea, adhering to rocks, particularly in the Mediterranean, about the iſlands of the Archipelago. It has been commonly ſuppoſed a vegetable production, but is more probably, like the corallines, of animal origin. Chemically analyſed, it yields, like animal ſubſtances, a volatile alkaline ſalt, and this even in larger quantity than I have obtained from any of the other animal matters except the bags of the ſilkworm: the caput mortuum, incinerated, yields alſo a large proportion of fixt ſalt, not however an alkaline one like that of vegetables, but chiefly of the marine kind: a like ſalt is obtainable by boiling the ſponge in water without burning.

Dry ſponge, from its property of imbibing and ſwelling by moiſture, is ſometimes uſed as a tent for dilating wounds and ulcers: for this purpoſe, after being carefully freed from the ſmall ſtones generally lodged in it, it is dipt in melted wax, and the wax ſqueezed out from it in a preſs†. * It has alſo been found to be the moſt efficacious of all thoſe ſubſtances which have been employed to ſuppreſs hemorrhagies on the ground of their ſtrong adheſion to the mouths of the wounded veſſels; ſuch as agaric, puff ball, &c. For this purpoſe, a very dry and ſolid piece, of a cubical or conical form, ſhould be applied in cloſe contact with the veſſel, and retained by proper compreſſion. It ſoon adheres with great force; and indeed its difficult removal is one of its chief inconveniencies.

† Spongia præparata *Ph. Pariſ.*

encies. Very large arteries have been prevented from bleeding by this application *(a)*.

Burnt in a close earthen vessel, till it becomes black and friable †, it has been given in doses of a scruple against scrophulous complaints and cutaneous defedations; in which it has sometimes been of service, in virtue, probably, of its saline matter, the proportion of which, after the great reduction which the other matter of the sponge has suffered in the burning, is very large. By virtue of this saline matter also, the preparation, if ground in a brass mortar, corrodes so much of the metal, as to contract a disagreeable taint and sometimes an emetic quality: hence the college expressly orders it to be powdered in a mortar of glass or marble. * The burned sponge is a principal article in what is called the Coventry method of cure in the bronchocele, and also in that published by Mr. Prosser *(b)*.

† Spongia usta *Ph. Lond. & Ed.*

STANNUM.

STANNUM Pharm. Lond. & Edinb. TIN: a silver-coloured metal, not liable to rust, but losing its brightness in the air; easily flexible, and making a crackling noise in being bent; little more than seven times specifically heavier than water; fusible in a heat far below ignition, and somewhat less than that in which lead melts. Heated till almost ready to melt, it proves extremely brittle, so as to fall in pieces from a blow. Melted, and nimbly agitated at the time of its beginning to congeal (as by shaking in a wooden box rubbed on the inside with chalk) it

Stannum pulveratum *Ph. Lond.*
Stanni pulvis *Ph. Ed.*

(a) See White's *Cases in Surgery*.

(b) See Wilmer's *Cases in Surgery*, and Prosser *on the Bronchocele*.

is reduced partly, and by repetitions of the proceſs totally, into powder. Continued in fuſion for ſome time, and kept ſtirring with an iron rod, it changes into a duſky calx; which, urged longer in the fire, gains a perfect whiteneſs, a mark of the purity of the tin. It is corroded by vegetable acids, and renders them turbid and whitiſh: the nitrous acid pretty readily diſſolves it, but ſoon depoſites a part in form of a thick mucilage, eſpecially if the acid has any admixture of the vitriolic: the vitriolic and marine acids are very difficultly made to act upon it: its moſt perfect menſtruum is a mixture of the marine and nitrous.

The principal uſe of this metal in the preſent practice is as an anthelmintic: even the flat worms, which too often elude the force of other medicines, are ſaid to be effectually deſtroyed by powdered tin. The common doſe of the powder is from a ſcruple to a dram, but Dr. Alſton affirms, in the Edinburgh medical eſſays, that its ſucceſs depends chiefly on its being given in much larger quantities, as half an ounce or an ounce. It is poſſible, that the anthelmintic virtues of tin may proceed, not ſo much from the pure metal, as from a certain ſubſtance of a different nature, which there are grounds to ſuſpect that the pureſt ſorts of tin uſually met with, participate of; filings of tin, held in the flame of a candle, emit a thick fume ſmelling like garlick: Mr. Marggraf reports *(a)*, that by gentle diſſolution in aqua regis and ſlow evaporation, he obtained cryſtals, which on being expoſed to the fire, with the addition of ſome fixt alkaline ſalt to abſorb their acid, ſublimed into a white concrete; and that this ex-

(a) Memoires de l'acad. roy. des ſciences de Berlin, tom. iii.

haled

haled in the fire in fumes of a ſtrong garlick ſmell, formed with ſulphur yellow and red compounds, and whitened copper (ſee *Arſenicum*). It muſt be obſerved, however, that notwithſtanding theſe ſtrong preſumptions, not to ſay proofs, of an arſenical impregnation in tin, the metal taken in ſubſtance has not been obſerved to be noxious, though the fumes which it emits in a red heat are undoubtedly ſo.

A ſparkling gold-coloured preparation of tin, called moſaic gold, is prepared by adding ſix ounces of quickſilver to twelve of melted tin, pulverizing the maſs when grown cold, mixing with it ſeven ounces of flowers of ſulphur and ſix of ſal ammoniac, and ſubliming in a matras: the moſaic gold is found under the ſublimed matter, with ſome droſs at the bottom. This preparation is chiefly valued for its beautiful appearance: as a medicine it is at preſent little regarded, though formerly held in conſiderable eſteem againſt hyſterical and hypochondriacal complaints, malignant fevers, and venereal diſorders. It appeared, upon experiment, to be little more than a calx of tin: tin, calcined by itſelf, gains nearly as much in weight, as it does by being made into moſaic gold; and the moſaic gold, melted with inflammable fluxes, is revived into tin again without ſuffering much more loſs than the ſimple calx. The volatile ingredients, ſal ammoniac, ſulphur, and quickſilver, ſublime in the proceſs, partly eſcaping, and partly forming the ſcoriæ: great part of the ſulphur and mercury are found united together into the form of cinnabar.

A ſalt of tin is directed to be prepared, from twelve ounces of calx of tin and four of aqua regia diluted with twenty-four of water: after digeſtion for two days, the veſſel is to be Sal Jovis.

ſhaken, the more ponderous part of the undiſſolved calx ſuffered to ſettle, the turbid liquor poured off and evaporated nearly to dryneſs, and the maſs further exſiccated on brown paper: to the remaining calx, half the quantity of freſh menſtruum is to be added, and the proceſs repeated. Of the virtues of this ſalt I can ſay nothing from experience, except that it is in taſte very ſharp and almoſt corroſive. Nor do I apprehend the uſe of calcining the metal, as tin uncalcined diſſolves much more eaſily and more plentifully: the ſolution is in both caſes the ſame, the fire in the calcination diſſipating only the inflammable principle of the tin, which the acid equally does in the ſolution and evaporation. Hoffman ſays, that ſolution of tin is a ſtrong purgative.

STAPHISAGRIA.

STAPHISAGRIA Pharm. Lond. & C. B. Staphys, pedicularia, & herba pedicularis quibuſdam. Delphinium Staphyſagria Linn. STAVESACRE: a plant with large leaves, ſet on long pedicles, deeply divided into ſeveral ſegments; producing irregular blue flowers with a tail behind like thoſe of larkſpur, followed by pods containing large, rough, triangular, dark-coloured ſeeds. It is annual, a native of the ſouthern parts of Europe, from whence the ſhops have been generally ſupplied with the ſeeds.

THE ſeeds of ſtaveſacre have a diſagreeable ſmell, and a very nauſeous bitteriſh burning taſte. They were formerly employed ſometimes as a cathartic, in doſes of from twelve grains to a ſcruple: but they operate with ſo much violence

violence both upwards and downwards, and are ſo liable not only to diſorder the bowels, but likewiſe to inflame the throat, that their internal uſe has been long laid aſide. They are now uſed only in external applications, for ſome kinds of cutaneous eruptions, and for deſtroying inſects. Their acrimony is extracted partially by water, totally by rectified ſpirit, and not elevated in diſtillation by either.

STOECHAS.

STOECHAS purpuræa C. B. Lavandula Stœchas Linn. FRENCH LAVENDER: a low ſhrubby plant, with ſmall oblong narrow leaves, bearing on the tops of the branches ſhort thick ſpikes or ſcaly heads, from which iſſue ſeveral ſmall purple labiated flowers, followed each by four ſeeds incloſed in the cup. It is a native of the ſouthern parts of Europe, common in our gardens, and flowers in May or June. The ſhops have been generally ſupplied, from Italy and the ſouth of France, with the flowery tops, often mouldy, and never equal to thoſe of our own growth.

THE beſt ſtechas which we receive from abroad has no great ſmell or taſte; Pomet affirms, that ſuch as is to be met with in the ſhops of Paris is entirely deſtitute of both; whereas ours, both whilſt freſh and when carefully dried, has a pretty ſtrong aromatic ſmell, and a moderately warm pungent bitteriſh taſte. Diſtilled with water, it yields a conſiderable quantity of a pale-coloured fragrant eſſential oil: the remaining decoction is unpleaſantly bitteriſh and ſubaſtringent. With rectified ſpirit, it gives over nothing conſiderable, greateſt

part of the active matter of the ſtechas being left in the extract. Both the herb itſelf and its preparations are much leſs grateful than lavender, with which it is ſuppoſed to have ſome agreement in virtue.

*STRAMONIUM.

STRAMONIUM Pharm. Edinb. Solanum fœtidum, pomo ſpinoſo oblongo C. B. Datura Stramonium Linn. THORN-APPLE: an herbaceous plant, with a thick branched ſtalk, two or three feet high, large ſinuated indented leaves, and long tubular white or purpliſh flowers, ſucceeded by large, prickly, green, fleſhy ſeed-veſſels, which open at the end in four diviſions, and diſcloſe numerous black ſeeds. It is ſown in gardens, and ſometimes found wild among rubbiſh. It flowers in July.

THIS plant, which has been long known as a narcotic poiſon, has been introduced into the catalogue of medicines by Dr. Stœrck. An extract made from the expreſſed juice of the leaves is acrid and ſaline to the taſte, and yields cryſtals of nitre on ſtanding. This preparation given in doſes of from one to five grains twice or thrice a day, is ſaid to be a very powerful remedy in various convulſive and ſpaſmodic diſorders, epilepſy and mania. The accounts of other practitioners have confirmed that of the firſt introducer, and it has been received into ſome pharmacopœias.

An abridged account of its medicinal properties, with ſome inſtances of its efficacy, from a treatiſe printed at Upſal by Dr. Wedenberg, is to be met with in the *Med. Comment.* vol. iii. p. 18. An ointment prepared from the

the leaves has been found to give eaſe in external inflammations and hæmorrhoids.

Several inſtances are recorded of the bad effects of inadvertently eating the ſeeds of thorn-apple. Emetics and purgatives give the ſpeedieſt relief in theſe caſes, which it is ſometimes neceſſary frequently to repeat, as ſome of the ſeeds have been found to lodge a conſiderable time in the ſtomach.

STYRAX.

STYRAX Pharm. Lond. Styrax calamita Pharm. Edinb. SOLID STORAX: an odoriferous reſin, exuding in the warmer climates from a middling-ſized tree *(ſtyrax folio mali cotonei C. B. Styrax officinale Linn.)* with leaves like thoſe of the quince, flowers like thoſe of the orange tree, and fruit like filberds; a native of Aſia, and, as is ſaid, of Italy. Two ſorts of this reſin have been commonly diſtinguiſhed in the ſhops.

1. *Storax in the tear:* not in ſeparate tears, or exceeding rarely, but in maſſes, ſometimes compoſed of whitiſh and pale reddiſh brown tears, and ſometimes of an uniform reddiſh-yellow or browniſh appearance; unctuous and ſoft like wax, and free from viſible impurities. This is ſuppoſed to be the ſort which the ancients received from Pamphylia in reeds or canes, and which was thence named calamita.

2. *Common ſtorax:* in large maſſes, conſiderably lighter and leſs compact than the foregoing, and having a large admixture of woody matter like ſaw-duſt. This appears to be the kind intended by the London college, as they direct their *ſtyrax calamita* to be purified, for medicinal Styrax colatus *Ph. Lond.*

dicinal uſe, by ſoftening it with boiling water, and preſſing it out from the feces betwixt warm iron plates; a proceſs which the firſt ſort does not ſtand in need of. And indeed there is rarely any other than this impure ſtorax to be met with in the ſhops.

The writers on the materia medica in general prefer the pure ſtorax in the tear, and reject that which is mixed with woody matter. It appears however, upon compariſon, that this laſt, notwithſtanding its large proportion of impurities, is the moſt fragrant of the two: nor is it difficult to aſſign a reaſon for this ſuperiority, as the pure juice muſt have required, for its inſpiſſation to a firm conſiſtence, a longer expoſure to the ſun and air, and conſequently loſt more of its volatile parts, than when abſorbed and thickened by the woody ſubſtance.

Common ſtorax, infuſed in water, imparts to the menſtruum a gold yellow colour, ſome ſhare of its ſmell, and a ſlight balſamic taſte. It gives a conſiderable impregnation to water by diſtillation, and ſtrongly diffuſes its fragrance when heated, though it ſcarcely yields any eſſential oil. Hence, in the purification of it by ſtraining, it is apt to ſuffer a conſiderable loſs of its finer matter, which is partly diſſipated by the heat, and partly kept diſſolved by the water: a part of the ſtorax is likewiſe defended by the woody ſubſtance from the action of the preſs, and left behind among the feces. It may be purified rather more elegantly by means of rectified ſpirit, which readily diſſolves the fine reſin, leaving only the impurities and a little inert gummy matter: the ſpirit gently diſtilled off from the filtered reddiſh-yellow ſolution, brings over with it very little of the fragrance of the ſtorax; and the remaining reſin is more fragrant

grant than the fineſt ſtorax in the tear which I have met with. The pure reſin, diſtilled without addition, yields, along with an empyreumatic oil, a portion of ſaline matter ſimilar to the flowers of benzoine; I have ſometimes alſo extracted from it a ſubſtance of the ſame nature by coction in water.

Storax is one of the moſt agreeable of the odoriferous reſins, of a mild taſte, of no great heat or pungency, nearly ſimilar, in its medical as in its pharmaceutic qualities, to benzoine and balſam of Tolu. It is not, however, much uſed in common practice, unleſs as an ingredient in ſome of the old compoſitions.

STYRAX LIQUIDA.

LIQUID STORAX: a reſinous juice; obtained from a large tree with angular leaves like thoſe of the maple, and a round fruit compoſed of a number of pointed ſeed-veſſels, called by Ray *ſtyrax aceris folio*, by Linnæus *Liquidambar ſtyraciflua*, a native of Virginia and Mexico, and lately naturalized to our own climate. The juice called liquidambar is ſaid to exude from inciſions made in the trunk of this tree, and the liquid ſtorax to be obtained by boiling the bark or branches in water.

Two ſorts of liquid ſtorax are diſtinguiſhed by authors: one, the purer part of the reſinous matter that riſes to the ſurface in boiling, ſeparated by a ſtrainer, of the conſiſtence of honey, tenacious like turpentine, of a reddiſh or aſh brown colour, moderately tranſparent, of an acrid unctuous taſte, and a fragrant ſmell, faintly reſembling that of the ſolid ſtorax, but ſomewhat diſagreeable: the other, the more impure

impure part, which remains on the ſtrainer, untranſparent, in ſmell and taſte much weaker, and containing a conſiderable proportion of the ſubſtance of the bark. What is moſt commonly met with under this name in the ſhops, is of a weak ſmell, and a grey colour, and is ſuppoſed to be an artificial compoſition.

Liquid ſtorax has been employed chiefly in external applications. Among us, it is at preſent almoſt wholly in diſuſe.

SUCCINUM.

SUCCINUM Pharm. Lond. & Edinb. Amharum citrinum & electrum quibuſdam. AMBER: a ſolid, brittle, bituminous ſubſtance, dug out of the earth or found upon the ſea ſhores, moſt plentifully in Poliſh Pruſſia and Pomerania; of a white, yellow, or brown colour, ſometimes opake, and ſometimes very clear and tranſparent; of very little taſte; and ſcarcely any ſmell, unleſs heated or briſkly rubbed, in which circumſtances it yields a pretty ſtrong one, to moſt people agreeable.

Boiled in water, it neither ſoftens, nor undergoes any ſenſible alteration. Digeſted in rectified ſpirit, it imparts a yelloviſh or browniſh colour, a fragrant ſmell, and a bitteriſh aromatic taſte: by repetitions of the proceſs with freſh quantities of ſpirit, a conſiderable part of the amber by degrees diſſolves. The ſpirit, diſtilled off from the tinctures, is ſtrongly impregnated with their ſmell; nevertheleſs the remaining balſam, or ſoft extract, is found to be very ſtrong both in ſmell and taſte.

By alkalies, fixt and volatile, the vegetable, nitrous, and marine acids, it is ſcarcely at all acted

acted upon: the vitriolic acid diſſolves it into a deep purple liquor, from which the amber is precipitated on the mixture of any other acid, or of water, or ſpirit of wine *(a)*.

The ſpirituous tincture and balſam are medicines of great efficacy in hyſterical diſorders, cachexies, the fluor albus, ſome rheumatic pains, and in debilities and relaxations in general: in ſome caſes of this kind they have taken place, after bark and other corroborants of the vegetable kingdom had been given with little effect. The ſpirit, which diſtils in concentrating the tincture, may be reſerved for extracting a freſh tincture, either from another parcel of amber, or from that which remained after the former extraction. It is ſaid that if a little vitriolic acid be previouſly combined with the ſpirit, it will diſſolve more of the amber than pure vinous ſpirits. The amber is ſometimes given alſo in ſubſtance, levigated into an impalpable powder, but does not appear to act with ſo much advantage in this form as in a diſſolved ſtate.

Succinum præparatum *Pb. Lond.*

This concrete, expoſed to the fire in open veſſels, melts into a black maſs, takes flame, emits a copious ſmoke, with a ſmell like that which ariſes from the finer kinds of pitcoal, and burns almoſt entirely away. Diſtilled in a retort, it yields firſt an acidulous phlegm intermingled with a thin limpid oil, which grows thicker and deeper coloured as the fire is increaſed: at length a browniſh ſaline matter ariſes into the neck of the retort, ſucceeded by a groſſer oil, and at laſt, in a great heat, by a black thick pitchy matter. About the time that the

(a) See Stockar's *Specimen inaugurale de ſuccino.*

firſt

first oil begins to rise, the amber melts in the retort, and, unless the heat be cautiously regulated, is apt to boil over into the receiver: to prevent this accident, some previously mix with the amber an equal quantity of clean sand, which does not appear, however, to be of much use, for with due care the process succeeds equally without as with it.

† Sal succini purif. *Ph. Lond. & Ed.*

The salt is purified from its adhering oil, either by sublimation, or by repeated solution, filtration, and crystallization †. When perfectly pure, it is of a white colour, and of a penetrating gratefully acid subastringent taste. It dissolves in rectified spirit sparingly by the assistance of heat, not at all in the cold. Of cold water, in the common temperate state of the atmosphere, it requires for its solution above twenty times its own weight; of boiling water, only about twice its weight: in slow cooling, it shoots into triangular prismatic crystals, with the points obliquely truncated. In the heat of boiling water, it does not exhale, or suffer any visible alteration: in a greater one, it first melts, then rises in white fumes, and concretes again in the upper part of the glass into fine white flakes; leaving behind a small quantity of a dark coaly matter. It effervesces with alkalies and absorbent earths, and forms with them compound salts somewhat resembling those made with vegetable acids, its acid matter seeming to have a considerable analogy to the acids of the vegetable kingdom, and being essentially distinct from the three called mineral acids *(a)*: mixed with acids, it makes no sensible commotion. By these characters this salt may be distinguished from all the other matters that have been mixed

(a) See Neumann's *chemical works, p.* 237, *and* Stockar's *specimen.*

with

with or vended for it. With regard to its virtues, it is accounted aperient, diuretic, and antihyſteric: its great price has prevented its coming much into uſe, and probably its real virtues, though doubtleſs conſiderable, fall greatly ſhort of the opinion that has been generally entertained of them.

The oil †, diſtilled again by itſelf, is divided into a thinner oil which ariſes ‡, and a thicker part, which remains behind, called balſam of amber: ſome diſtil it from brine of ſea ſalt, or from plain water ‖, by which it becomes purer than when diſtilled without addition. This oil has a ſtrong bituminous ſmell, and a hot pungent taſte; and approaches more to the nature of the mineral petrolea than of the vegetable or animal diſtilled oils, being very difficultly, if at all, diſſoluble in vinous ſpirits. It is ſometimes given internally, in doſes of ten or twelve drops, as an antihyſteric and emmenagogue; and ſometimes employed externally in antihyſteric, paralytic, and rheumatic liniments or unguents.

† Ol. ſuccini *Ph. Ed.*
‡ *Ph. Lond.*
‖ Ol. ſuccini rectificatum *Ph. Ed.*

SULPHUR.

SULPHUR Pharm. Lond. BRIMSTONE: a yellow concrete, of no taſte, and ſcarcely any ſmell; melting in a ſmall degree of heat into a viſcous red fluid, and totally exhaling on an increaſe of the heat; readily inflammable, and burning with a blue flame and a ſuffocating acid fume.

It conſiſts of the vitriolic acid combined with a ſmall proportion of inflammable matter. If a combination of pure vitriolic acid with a pure fixt alkaline ſalt be melted in a cloſe veſſel with the addition of a little powdered charcoal, a true ſulphur will be produced, and the compound

pound will be the ſame (excepting for the earthy part of the charcoal) as if the alkali had been melted with common brimſtone. And contrariwiſe, if a combination of alkaline ſalt with common brimſtone be reduced into powder, and roaſted with a gentle heat, the inflammable principle exhales, and the remainder proves the ſame as if the alkali had been combined with the pure vitriolic acid: the diminution of weight, reſulting from this avolation of the inflammable principle, does not exceed two drams upon ſixteen ounces of the ſulphur *(a)*.

Greateſt part of the ſulphur met with in the ſhops is either extracted from certain ores by a kind of diſtillation *(b)*; or prepared from minerals abounding with vitriolic acid, by ſtratifying them with wood, which being ſet on fire, the ſulphur is collected in cavities made in the upper part of the pile *(c)*. The largeſt quantities are brought from Saxony, in irregular maſſes, which are afterwards melted and caſt into cylindrical rolls. Sulphur is found likewiſe native in the earth; ſometimes in tranſparent pieces, of a greeniſh or bright yellow colour; more commonly in opake grey ones with only ſome ſtreaks of yellow: this laſt is the ſort which is underſtood by the name *ſulphur vivum*, though what is ſold under this name in the ſhops is no other than the droſs which remains after the ſublimation of ſulphur. The native ſulphurs ſhould never be employed for any internal uſe without purification: they almoſt

(a) Vide Stahlii *Menſis Julius, Experimenta & animadverſiones ccc, &c.*

(b) Leopold, *Relatio de itinere ſuo Suecico.*

(c) Hoffman, *Obſervationes phyſico-chemicæ, lib.* iii. *obſ.* 9.

always

always participate of arsenic, which is discoverable in some by their having naturally more or less of a red colour, and in the others by their exhibiting this colour after a part of the pure sulphur has been separated by sublimation.

Sublimation is the most effectual method of purifying sulphur from arsenical as well as earthy admixtures; and by the same process it is reduced into a fine powder, somewhat of a softer kind than that obtained by triture. Those who prepare the flowers in the way of trade, use for the subliming vessel a large iron pot, capable of holding two or three hundred weight: this is placed under an arched chamber, lined with glazed tiles, which serves for the recipient. Some shall portion of sulphur that rises first, especially when the vessels are very large, or the air not sufficiently excluded, is apt to take fire, and give out its acid, which adhering to the flowers that sublime afterwards, communicates to them a sensible acidity or roughness; in consequence of which, they are sometimes found to coagulate milk, when taken internally to produce gripes, and to receive from some metalline vessels a disagreeable taint: hence the London college directed such of the flowers, as might happen to concrete or melt together from the vicinity of the receiver to the fire, to be reduced to powder, not with metalline instruments, but either in a wooden mill, or in a marble mortar with a wooden pestle. From this extraneous or superficial acid they are freed, by boiling them in water, and afterwards carefully washing them with cold water†.

Flor. sulph. *Ph. Lond.* & *Ed.*

† Flor. sulph. loti *Ph. Lond.*

Pure sulphur, taken in doses of from ten grains to a dram or more, gently loosens the belly, and promotes perspiration. It seems to pass through

through the whole habit; and manifeſtly tranſpires through the ſkin, as appears from the ſulphureous ſmell of perſons who have taken it, and ſilver being ſtained in their pockets to a blackiſh hue as by the vapour of ſulphureous ſolutions. In conſequence of theſe properties, and of this ſubtility of parts, it promiſes to be of great medicinal powers; but what its particular virtues are, experience has not as yet clearly determined. It is principally recommended againſt the piles, in diſorders of the breaſt, and in cutaneous eruptions: in the itch indeed it is a certain remedy, whether internally or externally uſed, but in other kinds of eruptions it has not equally ſucceeded, and perhaps its efficacy againſt the firſt depends not ſo much on its purifying the blood, as on its fumes being deſtructive to the cuticular animalcules to which the preſent theory aſcribes that diſtemper. It remarkably corrects or reſtrains the power of certain mineral ſubſtances of the more active kind: by the admixture of ſulphur, mercury becomes inert, the virulent antimonial regulus mild, and arſenic itſelf almoſt innocent: hence though ſulphur ſhould contain a ſmall proportion of arſenic, it poſſibly may not receive from that poiſonous ingredient any very hurtful quality.

This concrete is not acted on by water, by acids, or by vinous ſpirits; but diſſolves, by the aſſiſtance of heat, in oils both expreſſed and diſtilled, and in the mineral petrolea: when diſſolved, it yields a very offenſive ſmell, and diſcovers to the taſte a nauſeous pungency and heat. Expreſſed oils and petroleum diſſolve it more readily and more plentifully than the diſtilled, taking up ſo much as to become thick and almoſt conſiſtent: the college of London directs

directs one part of flowers of ſulphur and four of oil-olive†, and the ſame proportions of the flowers and of petroleum ‡, and that of Edinburgh one ounce of the flowers and eight ounces of oil-olive‖, to be boiled together till they unite into the conſiſtence of a balſam. Eſſential oils do not load themſelves ſo much with the ſulphur as to become thick. As ſoon as the ſulphur begins to be ſtrongly acted on either by expreſſed or eſſential oils, which happens nearly about the point of ebullition, or in ſuch a heat as the ſulphur by itſelf would melt in, the matter rarefies and ſwells up greatly, ſo as to require the veſſel to be very large and occaſionally removed from the heat; and at the ſame time throws out impetuouſly great quantities of an elaſtic vapour, which, if a free exit is not allowed it, produces violent exploſions. The volatile flavour of the eſſential oils is in great meaſure diſſipated in this proceſs by the great heat requiſite for effecting the ſolution: a more elegant compoſition of this kind might be obtained by adding to the eſſential oil a proper quantity of the balſam made with expreſſed oils, which will unite with it by a gentle warmth. The balſams of ſulphur have been employed externally for cleanſing and healing foul running ulcers. They are recommended internally in ſome cachectic and hydropic caſes; as alſo in coughs and conſumptions, in which they promiſe, by their manifeſt heat and acrimony, to be oftener injurious than beneficial: they have been frequently obſerved to hurt the appetite, and excite febrile ſymptoms.---It may be obſerved, that in theſe ſolutions the component parts of the ſulphur are in ſome meaſure diſunited from one another; inſomuch that a conſi-

† Oleum ſulphurat.

‡ Petroleum ſulphur.

‖ Balſ. ſulph. craſſum.

derable quantity of ſulphureous acid, but no actual ſulphur, ſeparates in diſtillation.

Kali ſulphurat. *Ph. Lond.* †

Fixt alkaline ſalt, ſtirred by little and little into twice [or rather half] [or a fifth part†] its weight of ſulphur in fuſion, unites with it into a red maſs called from its colour *liver* of ſulphur. This compound has a fetid ſmell, and a nauſeous taſte: it diſſolves in water, and deliquiates in the air, into a yellow fluid: thrown, whilſt hot from the fire, into rectified ſpirit of wine, in the proportion of about four ounces to a pint, and digeſted about twenty-four hours, it communicates a rich gold colour, a particular not ungrateful ſmell, and a hot ſomewhat aromatic taſte. Solutions of the liver in water, made with ſugar into a ſyrup; and a few drops of the tincture mixed with a glaſs of canary or other rich wine, to which it communicates a milky hue; have been ſometimes given in the ſame intentions as the balſams, and ſeem to be accompanied with the ſame inconveniences.

Hepar ſulphuris.

Tinctura ſulphuris.

Syrupus ſulphuris.

Flowers of ſulphur may be diſſolved in water by boiling them with thrice their weight of quicklime, though not ſo readily as by alkaline ſalts. If the filtered ſolution be long expoſed to the atmoſphere, or if air from the lungs be blown into it for a ſhort time through a glaſs pipe, the lime gradually ſeparates, as it does from common lime-water; and the ſulphur, which was diſſolved by means of the lime, ſeparates and precipitates along with it. Common alkalies, fixt or volatile, added to the ſolution of ſulphur in lime-water, occaſion a precipitation of the lime, the ſulphur continuing diſſolved; cauſtic alkalies make no precipitation.

On

On adding to the ſulphureous ſolution, whether made by lime or by alkalies, ſome of the weak ſpirit of vitriol, (or any other acid) the liquor becomes milky, an extremely fetid and diffuſive inflammable vapour ariſes, and on ſtanding for ſome time the ſulphur ſettles to the bottom in form of a white powder, which, when waſhed with freſh quantities of water, becomes inſipid and inodorous, and is vulgarly called *lac* or milk of ſulphur: the liquor after the precipitation retains ſtill a ſulphureous impregnation, which further additions of acid will not precipitate. The method of preparing the lac with fixt alkalies is the moſt expeditious and leaſt troubleſome, provided the ſulphur has been thoroughly united with a ſufficient quantity of the alkali†; and on the other hand, quicklime gives the preparation a more ſaleable whiteneſs. The medicine proves in either caſe nearly the ſame: it would be exactly the ſame if the precipitation was made with any other acid than the vitriolic; which forms with the diſſolved lime a ſelenitic concrete, not ſeparable from the lac by any ablution, but with the alkali a neutral ſalt, which by hot water may be totally diſſolved and waſhed off; whereas the combinations of all the other acids, with lime as well as with alkalies, are eaſily diſſoluble even in cold water. The pure lac is not different in quality from pure ſulphur itſelf; to which it is preferred, in external applications, only on account of its colour. The whiteneſs does not proceed from the ſulphur having loſt any of its parts in the operation, nor from any new matter ſuperadded: on being melted with a gentle fire, it reſumes its yellow hue.

† Sulphur præcipitat. *Ph. Lond.*

A ſolution of ſulphur in volatile alkaline ſpirits may be obtained, by boiling half a pound Tinct. ſulph. volatilis *vulg.*

of flowers of ſulphur with a pound of quicklime, in a gallon of water, till half the liquor is waſted; then putting the remainder into a retort, with eight ounces of powdered ſal ammoniac, and diſtilling with a gradual fire. The ſpirit comes over loaded with the ſulphur, and has a ſtrong offenſive ſmell, ſomewhat reſembling that which riſes in the precipitation of the lac. Hoffman ſays, a mixture of it with thrice its quantity of ſpirit of wine, given in doſes of thirty or forty drops, proves a powerful diaphoretic; and that applied externally as a fomentation, with the addition of camphor, it alleviates gouty pains.

The flowers of ſulphur in ſubſtance ſeem to be preferable for internal uſe to any of the preparations: they are certainly more ſafe, and and perhaps not leſs effectual; as they do not heat or irritate the firſt paſſages, and yet are evidently diſſolved in the body and carried through the habit. They are moſt commodiouſly taken in the form of troches: the college of London directs for this purpoſe two ounces of the waſhed flowers, and four of double refined ſugar, to be beaten together, and made up with mucilage of quince ſeeds; that of Edinburgh, one ounce of the flowers of ſulphur, ten grains of flowers of benzoine, fifteen grains of factitious cinnabar, and two ounces of fine ſugar, to be formed with mucilage of gum tragacanth: by the addition of the flowers of benzoine in this laſt preſcription, the medicine is ſuppoſed to be rendered more efficacious in ſome diſorders of the breaſt.

Trochiſci e ſulphure *Ph. Lond.*

Trochiſci e ſulphure *ſive* diaſulphuris *Ph. Ed.*

A ſulphureous ointment, for the itch, is prepared, by mixing two ounces of the unwaſhed flowers, with three† or eight‡ ounces of the ſimple ointment called pomatum†, or of hogs-lard‡, and a ſcruple of eſſence of lemons. Half this

Unguentum ſulphuris † *Ph. Lond.* — e ſulphure *ſive* antipſoricum ‡ *Ph. Ed.*

this quantity is, in moſt caſes, ſufficient for a cure; though it may be proper to renew the application, and touch the parts moſt affected, for ſome nights longer, till the whole quantity is exhauſted. Some have been of opinion, that this external uſe of ſulphur is unſafe; that as ſulphur taken inwardly promotes the expulſion of impure humours and the eruption of cutaneous efflorescences, it muſt act, when outwardly applied, by repreſſing them. This conſequence, however, does not follow; nor is it by affecting the humours that it performs the cure: for it equally removes the itch, whether uſed internally or externally, by its vapours diffuſed through the ſkin. All the danger, that is to be apprehended from ſulphureous unguents, is that which may ariſe from the obſtruction of the cutaneous pores by the unctuous matter; and to prevent any diſorders from this cauſe, only a part of the body is to be anointed at one time.

SUMACH.

SUMACH ſive Rhus obſoniorum. Rhus folio ulmi C. B. Rhus coriaria Linn. SUMACH: a ſhrub or low tree; with oval, pointed, ſerrated, downy leaves, having each a red rib running along the middle, ſet in pairs without pedicles; producing cluſters of ſmall yellowiſh or greeniſh flowers, each of which is followed by a ſmall, red, flattiſh berry, including a roundiſh reddiſh-brown ſeed. It is a native of the ſouthern parts of Europe, and cultivated in ſome of our gardens.

THE berries of ſumach have an acid auſtere taſte: they were formerly uſed for reſtraining

bilious fluxes, and hemorrhagies, and colliquative hectic ſweats: ſome direct an infuſion of half an ounce of the berries, and others two or three drams of an extract made from them by water, for a doſe. The leaves and young twigs are ſtrong aſtringents, and have been directed in the ſame intentions.

TACAMAHACA.

TACAMAHACA. A reſin; obtained from a tree, reſembling the poplar, *(Populus balſamifera Linn.)* bearing, at the extremities of the branches, ſmall roundiſh fruits including a ſeed like a peach-kernel; a native of the temperate parts of the continent of America, and in a ſheltered ſituation enduring the winters of our own country.

Two ſorts of this reſin are ſometimes to be met with. The beſt, called, from its being collected in a kind of gourd-ſhells, tacamahaca in ſhells, is ſomewhat unctuous and ſoft, of a pale yellowiſh or greeniſh colour, a bitteriſh aromatic taſte, and a fragrant delightful ſmell approaching to that of lavender and ambergris. This ſort is very rare. That commonly found in the ſhops is in ſemitranſparent grains or glebes, of a whitiſh, yellowiſh, browniſh, or greeniſh colour, and of a leſs grateful ſmell than the foregoing. The firſt is ſaid to exude from the fruit of the tree, the other from inciſions made in the trunk. The tree, as raiſed among us, affords in its young buds, or the rudiments of the leaves, a reſinous juice of the ſame kind of fragrance *(a)*.

(a) See article *Populus*.

Tacamahaca

Tacamahaca is uſed chiefly as an ingredient in warm nervine plaſters; though the fragrance and taſte of the finer ſort points out its being applicable to other purpoſes, as an internal balſamic corroborant. Both kinds diſſolve in rectified ſpirit into a gold-coloured liquor, only a ſmall quantity of impurities being left: they impregnate water alſo conſiderably with their ſmell and taſte, but give out very little of their ſubſtance to this menſtruum.

TALCUM.

TALC: an earthy concrete; of a fibrous or leafy texture; more or leſs pellucid, bright or glittering; ſmooth and ſlippery to the touch; in ſome degree flexible and elaſtic, ſo as ſcarce to be pulverable; ſoft, ſo as to be eaſily cut; ſuffering no change in an intenſe fire, or no other than a diminution of its brightneſs, flexibility, and unctuoſity; not acted upon by acids, either in its crude ſtate, or after vehement calcination. There are ſeveral different appearances of this earth; among which, the greeniſh foliaceous *Venice talc* has been ſelected for medicinal uſe; though it does not appear capable of anſwering any medicinal intention, as not being diſſolved, or ſenſibly affected, by any known humid menſtruum: on account of its unctuous ſoftneſs, and the ſilver hue which it exhibits when reduced by raſping or otherwiſe into powder, it has been employed externally as a coſmetic. The fibrous flexible *amianthus* or *aſbeſtos*, and the more rigid fibrous *alumen plumoſum*, ſeem to approach to the nature of the talcs, and made an equally inſignificant addition to the articles of the materia medica in our former pharmacopœias.

TAMARINDUS.

TAMARINDUS Pharm. Lond. & Edinb. Oxyphœnicon. TAMARIND: the fruit of a pretty large tree, *(ſiliqua arabica quæ tamarindus C. B. Tamarindus indica Linn.)* growing in Arabia and in the Eaſt and Weſt Indies. The fruit is a pod, ſomewhat reſembling a bean-cod, including ſeveral hard ſeeds, together with a dark-coloured viſcid pulp: the Eaſt India tamarinds are longer than thoſe of the Weſt, the former containing ſix or ſeven ſeeds each, the latter rarely above three or four: they nevertheleſs ſeem both to be the produce of one ſpecies of plant. The pulp, with the ſeeds, connected together by numerous tough ſtrings or fibres, are brought to us freed from the outer ſhell: the oriental ſort is drier and darker coloured than the occidental, and has more pulp: the former is ſometimes preſerved without addition, the latter has always an admixture of ſugar.

THE pulp of tamarinds is an agreeable laxative acid; of common uſe in inflammatory and putrid diſorders, for abating thirſt and heat, correcting putrefaction, and looſening the belly. The doſe, as a laxative, is two or three drams: an ounce or two prove moderately cathartic. It is an uſeful addition to the purgative ſweets, caſſia and manna, increaſing their action, and rendering them leſs liable to produce flatulencies: the reſinous cathartics are ſaid to be ſomewhat weakened by it. Tournefort relates that an eſſential ſalt may be obtained from tamarinds, by diſſolving the pulp in water, and ſetting the filtered ſolution, with ſome oil upon the

the ſurface, in a cellar for ſeveral months; that the ſalt is of a ſouriſh taſte, and difficultly diſſoluble in water; and that a like ſalt is ſometimes found alſo naturally concreted on the branches of the tree. The ſalt, as Beaumé obſerves, may be obtained more expeditiouſly, by clarifying the decoction of the tamarinds with whites of eggs, then filtering and evaporating it to a proper conſiſtence, and ſetting it to cool: the ſalt ſhoots into cryſtals, of a brown colour, and very acid taſte; but in diſſolving and cryſtallizing them again, or barely waſhing them with water, they loſe almoſt all their acidity, the acid principle of the tamarinds ſeeming not to be truly cryſtallizable.

TANACETUM.

TANACETUM Pharm. Lond. and Edinb. Tanacetum vulgare luteum C. B. Tanaſia, athanaſia, & parthenium mas quibuſdam. Tanacetum vulgare Linn. TANSY: a plant with large leaves, divided to the rib, on both ſides, into oblong deeply indented ſegments; producing, on the tops of the ſtalks, ſeveral gold-coloured diſcous flowers, in umbel-like cluſters, followed by ſmall oblong blackiſh ſeeds. It is perennial, grows wild by road-ſides and about the borders of fields, and flowers in June and July.

THE leaves and flowers of tanſy have a ſtrong, not very diſagreeable ſmell, and a bitter ſomewhat aromatic taſte: the flowers are ſtronger though rather leſs unpleaſant than the leaves. They give out their virtue both to water and ſpirit, moſt perfectly to the latter: the tincture, made from the leaves, is of a fine green, from the flowers of a bright pale yellow colour. Diſtilled

Diſtilled with water, they yield a greeniſh-yellow eſſential oil, ſmelling ſtrongly of the herb: the remaining decoction, inſpiſſated, affords a ſtrong bitter ſubſaline extract. The ſpirituous tinctures give over alſo, in inſpiſſation, a conſiderable part of their flavour *(a); a part of it remaining, along with the bitter matter, in the extract.

This plant is uſed as a warm deobſtruent bitter, in weakneſs of the ſtomach and in cachectic and hyſteric diſorders; and likewiſe as an anthelmintic. The ſeeds have been chiefly recommended in this laſt intention, and ſuppoſed by ſome to be the *ſantonicum* of the ſhops, from which they differ not a little in quality as well as in appearance, being much leſs bitter, and of a more aromatic flavour.

TARAXACUM v. DENS LEONIS.

TARTARUM.

TARTARUM vini albi vel rubri. TARTAR: an acid concrete ſalt thrown off from wines, after complete fermentation, to the ſides and bottoms of the caſks; of a red or white colour, and more or leſs droſſy, according to the colour and quality of the wine. The white is generally purer than the red: both kinds, when purified, are exactly the ſame.

THIS ſalt is one of thoſe which are moſt difficultly diſſoluble in water, being ſcarcely affected by it in the cold, and requiring ten or

*(a) Alcohol, diſtilled from tanſy, proved, after ſtanding for upwards of fifteen years, richly impregnated with the flavour of the plant, and ſufficiently grateful. *M. S. of Dr. Lewis.*

twelve

twelve times its own weight when assisted by a boiling heat. From this saturated solution the tartar begins to separate almost as soon as the boiling ceases: if the quantity of water is greater, as about twenty times the weight of the salt, it continues long enough suspended to be passed, with due care, through a woollen strainer or a filter. The filtered liquor appears nearly colourless, whether the tartar made use of was red or white: if hastily cooled, the salt separates in small grains like sand, but if the vessel is closely covered, and the heat very leisurely diminished, it shoots into semitransparent whitish *crystals:* if the filtered liquor be kept boiling, a thick skin forms on the surface, which, being taken off with a perforated wooden skimmer, is succeeded by fresh cuticles, till the whole of the salt is thus formed into what is called *creme* of tartar. The refining of tartar is practised, in the way of trade, chiefly about Montpellier, from whence the shops are generally supplied both with the crystals and creme; the process being so troublesome, and requiring so large conveniences, that it is scarcely ever attempted here. A certain earth, of the argillaceous kind, is added in the process, the chief use of which seems to be, to promote the separation of the colouring matter; for the salt extracted from the coloured tartars by water only is seldom of perfect whiteness. It is said that the earth generally contains some small portion of chalky matter, soluble in acids, which of consequence will be taken up by the tartar; I have sometimes observed solutions of the crystals to deposite an earthy precipitate on adding alkaline lye. The purer sort of white tartar, unrefined, especially that of Rhenish wine, is, for many purposes, particularly for combinations

Crystalli tartari *Ph. Lond. & Ed.*

Cremor tartari.

tions with other bodies, not inferiour either to the creme or cryſtals.

Pure tartar, in doſes of half a dram or a dram, is a mild cooling aperient: two or three drams gently looſen the belly; and ſix or eight prove moderately cathartic. Its acidity and laxative power are its medical characters.

* The difficult ſolubility of creme of tartar being an objection to its medical uſe, ſome experiments were made by Dr. Peter Jonas Berg, for rendering it more ſoluble by certain additions, without altering its medicinal qualities. Borax was found to anſwer beſt for this purpoſe. To four parts of creme of tartar, one of borax was added. Theſe were diſſolved in a ſufficient quantity of water, and the liquor ſtrained. About a ſixteenth part of impurities were left behind. The pure ſolution evaporated yielded an acid and extremely ſoluble white ſalt(*a*).

Tartar, diſſolved in water, effervesces with fixt alkaline ſalts, and ſaturates, of the vegetable alkalies, near one third its own weight. The compound ſalt, reſulting from their union, is a neutral one, more purgative than the tartar itſelf, and far eaſier of ſolution, whence its name ſoluble tartar. This ſalt is prepared, either by boiling the refined tartar in a ſufficient quantity of water till it is diſſolved, and then dropping in ſtrong alkaline lye; or by diſſolving the alkali in boiling water in the proportion of a pound to a gallon†, or to fifteen pounds‡, and then adding the tartar, till a freſh addition occaſions no further effervescence; which generally happens before triple the weight of the

Kali tartariſat. † *Ph. Lond.*
Alcali fixum vegetabile tartariſatum *vulgo* tart. ſolub. ‡ *Ph. Ed.*
Sal. vegetabilis *quibuſd.*

(*a*) *Nova Acta Phyſico-Medica Academiæ Cæſareæ Leopoldino-Carolinæ Naturæ Curioſorum, tom. quart.*

alkali

alkali is thrown in: the liquor is then filtered while hot, and either cryſtallized or evaporated to dryneſs. As this ſalt difficultly cryſtallizes, inſpiſſation to dryneſs is the moſt convenient method; and in this caſe, to ſecure the neutralization of the ſalt, the tartar may be made to prevail at firſt, and the liquor ſuffered to cool a little before filtration, that the redundant tartar may concrete and ſeparate from it; or the neutralization may be more perfectly obtained by means of ſtained papers, as mentioned at the end of the article *Acetum*.

Natron tartariſatum *Ph. Lond.* Soda tartariſata *vulgo* ſal rupellenſis *Ph. Ed.* Sel de Seignette, Rochelle ſalt.

Of the mineral fixt alkali or ſoda, this acid ſaturates, according to the faculty of Paris, four fifths its own weight. The London college directs ſix parts of the acid to five of the alkali. The neutral ſalt reſulting from its coalition with this alkali, is ſomewhat leſs diſſoluble than that with the vegetable; and ſhoots much more eaſily, into pretty large, hard, multangular cryſtals, ſome columnar and flattiſh, others more irregular. It is milder in taſte, and ſaid to be leſs purgative, requiring to be given to the quantity of an ounce or an ounce and a half to purge effectually: eight drams are reckoned by ſome to be equivalent, in cathartic power, to ſix of the ſoluble tartar.

Tartar forms likewiſe ſoluble compounds with all the abſorbent earths, and with ſome metallic bodies, but with theſe laſt it is difficultly made to ſatiate itſelf completely, the part that is firſt ſaturated ſeeming to impede the action of the reſt; for after long boiling, a very conſiderable part of the tartar ſeparates on cryſtallization unchanged.

It is obſervable, that if any of theſe combinations of tartar, with alkalies, with earths, or with metals, be diſſolved in water, and any other

other acid added, the pure tartar ſeparates and falls to the bottom, as acid, and as difficult of ſolution, as at firſt; the ſubſtance, that was combined with it, being abſorbed by the acid ſuperadded. As the acids of the vegetable kingdom, whether native or fermented, vinegar, lemon juice, &c. have this effect of diſuniting tartar from all the bodies that are combinable with it, equally with thoſe of the mineral kingdom; it follows, that the tartareous acid, is of a kind eſſentially different from all the other known vegetable ones, and that no acid, unleſs it be tartar itſelf, can be joined in preſcription to the *tartarum ſolubile*, the *ſel de Seignette*, or the combinations of tartar with earths of metals.

*In the *Swediſh Tranſactions*, part iii. for the year 1770, was publiſhed an analyſis of creme of tartar by Mr. Scheele. By this it appears, that creme of tartar is not a pure acid, but a compound ſalt, containing the fixed vegetable alkali united with a ſuperabundance of the tartareous acid. It differs, therefore, from ſoluble tartar, only in the proportion of acid it contains.

TELEPHIUM.

TELEPHIUM: a plant with unbranched ſtalks, clothed with thick fleſhy oval leaves, but producing no leaves immediately from the root: the flowers ſtand in form of umbels on the top of the ſtalk, and are followed, each, by from three to ſix pods full of ſmall ſeeds: the root is irregular and knobby. It is indigenous in England, and perennial.

1. CRASSULA. *Telephium vulgare C. B. Anacampſeros, fabaria, & faba craſſa quibuſdam. Sedum*

Sedum Telephium Linn. Orpine: with the leaves very ſlightly or not at all ſerrated: growing in hedges and moiſt ſhady grounds, and producing reddiſh or whitiſh pentapetalous flowers in June. The leaves have been ſuppoſed to be poſſeſſed of an anti-inflammatory power; but their virtues appear to be very inconſiderable, as they have no ſmell, and only an herbaceous mucilaginous taſte.

2. RHODIOLA *ſive roſea: Rhodia radix C. B.* Roſewort: with ſerrated leaves; growing in mountainous places, and producing yellow tetrapetalous flowers in the ſpring. The root of this ſpecies, of little ſmell when freſh, has when dry a very pleaſant one, reſembling, when the root is in perfection, that of the damaſk roſe: in this odorous matter conſiſts the medical virtue of the rhodiola, and its principal medical difference from the preceding ſpecies. Linnæus obſerves, that when raiſed in gardens, it has not one hundredth part of the ſmell or virtue of that which is produced on its native mountains.

TEREBINTHINÆ.

TURPENTINES: the native balſams or reſinous juices of certain trees. Four kinds are diſtinguiſhed by medical writers.

1. TEREBINTHINA CHIA *Pharm. Lond.* Chio or Cyprus turpentine: generally about the conſiſtence of thick honey, very tenacious, clear and almoſt tranſparent, of a white colour with a caſt of yellow and frequently of blue, of a warm pungent bitteriſh taſte, and a fragrant ſmell more agreeable than that of any of the other turpentines. It is the produce of the common

common terebinth *(terebinthus vulgaris C. B. Piſtachia terebinthus Linn.)*, an evergreen bacciferous tree or ſhrub, growing ſpontaneouſly in the eaſtern countries and in ſome of the ſouthern parts of Europe. The turpentine brought to us is extracted in the iſlands whoſe name it bears, by wounding the trunk and branches a little after the buds have come forth: the juice iſſues thin and clear as water, and by degrees thickens into the conſiſtence in which we meet with it. A like juice, exuding from this tree in the eaſt, inſpiſſated by a ſlow fire, is ſaid by Kæmpfer to be uſed as a maſticatory by the Turkiſh women, for preſerving the teeth, ſweetening the breath, and promoting appetite.

2. TEREBINTHINA VENETA *Pharm. Edinb.* Venice turpentine: uſually thinner than any of the other ſorts, of a clear whitiſh or pale yellowiſh colour, a hot pungent bitteriſh diſagreeable taſte, and a ſtrong ſmell, without any thing of the fine aromatic flavour of the Chian kind. The true Venice turpentine is ſaid to be obtained from the larch *(larix C. B. Pinus larix Linn.)*, a coniferous tree, with ſmall cones, and ſhort leaves ſtanding in tufts, which fall off in the winter, growing in great abundance on the Alps and Pyreneans, and not uncommon in the Engliſh gardens. Though this kind of turpentine bears the name of Venice, it is not the produce of the Venetian territories: it is brought from ſome parts of Germany, and one greatly reſembling it, as is ſaid, from New England. In the ſhops this turpentine is often ſupplied by a compoſition of roſin and the diſtilled oil of common turpentine.

3. TEREBIN-

3. TEREBINTHINA ARGENTORATENSIS. Straſburg turpentine: generally of a middle conſiſtence between the two foregoing, more tranſparent and leſs tenacious than either, in colour yellowiſh brown, in ſmell more agreeable than any of the other turpentines, except the Chian, in taſte the bitteriſh yet leaſt acrid. This juice is extracted, in different parts of Germany, from the ſilver and red fir, by cutting out, ſucceſſively, narrow ſtrips of the bark, from as high as a man can reach to within two feet of the ground. In ſome places, a reſinous juice is collected from certain knots under the bark: this, called *lacryma abiegna* and *oleum abietinum*, is accounted ſuperiour to the turpentine. Neither this turpentine, nor any thing under its name, is at preſent common in the ſhops.

4. TEREBINTHINA VULGARIS *Pharm. Lond.* Common turpentine: about the conſiſtence of honey, of an opake browniſh white colour, the coarſeſt, heavieſt, in ſmell and taſte the moſt diſagreeable, of all the kinds of turpentine. It is obtained from the wild pine *(pinus ſilveſtris C. B. & Linn.)*, a low coniferous tree, with the leaves longer than thoſe of the firs and iſſuing two together from one tubercle, growing wild in the different parts of Europe. This tree is extremely reſinous, inſomuch that, if not evacuated of its juice, it often ſwells and burſts. The juice, as it iſſues from the tree, is received in trenches made in the earth, and afterwards freed from its groſſer impurities by colature through wicker baſkets. The cones of the tree appear to contain a reſinous matter, of a more grateful kind than that of the trunk: diſtilled while freſh, they are ſaid to yield a fine eſſential oil greatly ſuperiour to that of the turpentines. Carpathicum oleum *Germanis.*

All these juices dissolve totally in rectified spirit, but give out little to watery menstrua: they become miscible with water, into a milky liquor, by the mediation of the yolk or white of an egg, and more elegantly by mucilages. Distilled with water, they yield a notable quantity of a subtile penetrating essential oil† vulgarly called spirit; a yellow‡ or blackish resin remaining in the still: this is the common rosin of the shops. It is supposed that the officinal Burgundy pitch ‖, which is brought from Saxony, is a preparation of the same kind, only less divested of the oil, made by boiling the common turpentine till it acquires a due consistence. The essential oil, rediſtilled by itself in a retort, with a very gentle heat, becomes more subtile, and in this state is called ethereal, or rectified§; a thick matter remaining behind, called balsam of turpentine¶. A like balsam is obtained also by distilling, with a stronger fire, the common resin; from which there arises, first a thin yellow oil, and afterwards the thicker dark-reddish balsam, a blackish resin† remaining in the retort.

† Ol. terebinth. *Ph. Lond. & Ed.*

‡ Resina flava *Ph. Lond.*
— alba *Ph. Ed.*

‖ Pix Burgundica *Ph. Lond. & Ed.*

§ Ol. terebinth. rectific. *Ph. Lond.*

¶ Balſ. terebinth.

† Resina nigra seu colophonia.

All the turpentines are hot stimulating corroborants and detergents. They are given, where inflammatory symptoms do not forbid their use, from half a scruple to half a dram and upwards, for cleansing the urinary passages and internal ulcerations in general, and in laxities of the seminal and uterine vessels. They seem to act in a peculiar manner on the urinary organs, impregnating the water with a violet smell, even when applied externally, particularly the Venice sort. This last is accounted the most powerful as a diuretic and detergent, and the Chio and Strasburgh as corroborants: they all loosen the belly, and Venice most; and on this account

account they are ſuppoſed by Riverius and others to be leſs hurtful than ſuch irritating diuretics, as are not accompanied with that advantage. Terebinthinate glyſters, in obſtinate coſtiveneſs, are ſaid to be much preferable to ſaline, as being more certain and durable *(a)*. The common turpentine, as being the moſt offenſive, is rarely given internally: its principal uſe is in ſome external applications, among the farriers, and for the diſtillation of the oil.

The oil is a moſt potent ſtimulating detergent diuretic. It is ſometimes given, in doſes of a few drops, in rheumatiſms and fixt pains of the joints; and ſome have ventured on much larger quantities. Cheyne recommends, as a perfect cure for ſciaticas, though of many years ſtanding, from one to four drams of the ethereal oil, to be taken with thrice its quantity of honey, in a morning faſting, with large draughts of ſack whey after it, and an opiate at bed-time: this medicine is to be repeated, with the intermiſſion of a day now and then, if daily repetitions cannot be borne, for four or five days, or eight at furtheſt *(b)*. It appears, however, highly imprudent, to venture on ſuch large doſes at once of a medicine ſo very hot and ſtimulating. Boerhaave, after recounting, not without ſome exaggeration, its ſtyptic, anodyne, healing, antiſeptic, and diſcutient virtues when applied hot externally, and its aperient, warming, ſudorific and diuretic qualities when taken internally, adds, that it muſt be uſed with great caution; that when taken too freely, it affects the head, excites heat and pain therein, and, violently urging a diabetes, brings on a flux of

(a) Cullen, *Mat. Med.*

(b) *Eſſay on the gout, edit.* 10. § lxxi. *p.* 119.

the ſemen and of the liquor of the proſtates; and that in venereal runnings, in which it has by ſome been commended, it tends to inflame the parts and increaſe the diſorder.

The balſam and the inſpiſſated reſins are uſed chiefly externally: the balſam is leſs pungent than the oil, and the reſins much leſs ſo than the turpentines in ſubſtance. The common yellow reſin, in taſte conſiderably bitter, is ſometimes given as an internal corroborant, in preference to the turpentines themſelves, as being diveſted of the ſtimulating oil.

TERRA JAPONICA.

CATECHU vulgo Terra Japonica Pharm. Lond. Terra japonica dicta Pharm. Edinb. JAPAN EARTH, improperly ſo called. *The plant which yields the terra japonica, grows in the Eaſt Indies, and is called *coira*, or *caira*, by the natives of Bahar province. It appears to be the ſame with that mentioned by Cleyerus and Herbert de Jagur, from which the natives of Pegu prepare this extract: they name the tree *Kheir* or *Khadira*.

It is a ſpecies of the genus *mimoſa* of Linnæus, and called by him *mimoſa catechu*. Its ſtem grows to about a foot in thickneſs, and from three to five feet high. It branches out into a thick ſpreading top, ſeldom above twelve feet high. The bark is thick and rough. The wood is extremely hard and heavy; its exterior part varies from a pale brown to a dark red, ſometimes approaching to black, but always covered with one or two inches thick of white wood. The leaves are doubly pinnated, and have two prickles at the baſe. From the axillæ of the leaves, ariſe denſe ſpikes of ſmall flowers, ſucceeded by pods.

The

The *terra japonica* is an extract of the wood of this plant, prepared in the following manner. After the trees are felled, the exteriour white wood is carefully cut off, and the interiour coloured part is cut into chips, with which narrow-mouthed unglazed earthen pots are filled, and water poured upon them till it appears among the upper chips. When this is half evaporated by boiling, the decoction, without straining, is poured into a flat earthen pot, and boiled to one third part; this is set in a cool place for one day, and afterwards evaporated by the heat of the sun, stirring it several times in the day; when it is reduced to a considerable thickness, it is spread upon a mat or cloth which has previously been covered with the ashes of cow-dung; this mass is divided into square or quadrangular pieces by a string, and completely dried by turning them frequently in the sun.

This extract is called by the natives *cutt*; by the English *cutch*. In making it, the pale brown wood is preferred, as it produces the fine whitish extract. The darker the wood is, the blacker the extract, and of less value. From the slovenly manner in which the preparation is made, it generally contains a considerable quantity of earth, besides what may be designedly put in it for the purpose of adulteration *(a)*.

This concrete is a mild astringent, more agreeable in taste than most of the other substances of that class, being accompanied with a considerable degree of sweetness. It is often suffered to dissolve leisurely in the mouth; both as a topical restringent for laxities and exulcera-

(a) From Mr. Kerr's account, in vol. v. of the *London* Medical *Observations*.

tions of the gums; and in alvine and uterine fluxes, and catarrhal coughs and hoarseness; medicines of this kind acting in general to much better advantage when thus gradually swallowed, than when taken in full doses at once. With this view the terra japonica is made in the shops into troches; beaten with equal its weight of gum-arabic, and four times the weight of both of sugar of roses, and so much water to be dropt in as will reduce them into a mass of a due consistence for being formed. The Edinburgh college directs a compound electuary, of which terra japonica is the basis, joined with other astringents and aromatics, and a small proportion of opium, which is a very elegant and efficacious medicine of the kind.

Trochisci e terra japon.

Electuar. japonic. *vulgo* confect. japon. *Ph. Ed.*

Japan-earth dissolves almost totally in water, excepting the impurities; which are usually of the sandy kind, and in considerable quantity, amounting, in the specimens I examined, to about one eighth of the mass. Of the pure matter, rectified spirit dissolves about seven eighths, into a deep red liquor: the part, which it leaves undissolved, is an almost insipid mucilaginous substance. In the shops a solution of it is made in proof spirit, with the addition of cinnamon, a spice the best adapted of any to the intention of this medicine; three ounces of the japan earth and two of cinnamon are digested in a quart† or two pounds and a half‡ of the spirit, and the strained tincture given commonly in doses of two or three tea-spoonfuls. It dissolves also in volatile alkaline spirits, in alkaline lye, in the mineral acids, partially and more difficultly in the vegetable acids, and not at all in oils: all the solutions are of a red or purplish colour.

Tinctura catechu † *Ph. Lond.* — japonic. ‡ *Ph. Ed.*

* By

*By the natives where this extract is made, it is employed medicinally as a cooler in the diſeaſes conſidered by them as of a hot nature. It is ſaid, when profuſely uſed, to deſtroy the venereal appetite. It is given at the rate of two ounces a day to tame vicious horſes. It is a principal ingredient in one of their ointments of great repute, compoſed of blue vitriol four drams, Japan-earth four ounces, alum nine drams, white reſin four ounces; theſe are reduced to a fine powder, and mixed by the hand with ten ounces of oil-olive, and water enough to give the maſs a proper conſiſtence. This ointment is uſed in every ſore, from a freſh wound to a venereal ulcer; and has been found remarkably ſerviceable by European practitioners *(a)*.

TERREA ABSORBENTIA.

ABSORBENT EARTHS: diſtinguiſhable from other earthy and ſtony ſubſtances by their ſolubility in acids. Such are, the mineral calcareous earths, as chalk: the animal calcareous earths, as crabs-claws, oyſter-ſhells, egg-ſhells, pearl, coral, coralline: animal earths not calcareous, as crabs-eyes and burnt hartſhorn. See the reſpective ſubſtances; which have been ſeparately treated of, ſo far as concerned each in particular; and whoſe general and common qualities were reſerved for this article.

THE obvious and immediate virtue of theſe bodies is, to obtund acid humours in the firſt paſſages, and thus to relieve the cardialgic and other complaints occaſioned by them: the relief,

(a) Kerr's Account, above quoted.

however, which they afford, is oftentimes only temporary; from their acting only upon the acid already generated, without correcting the indiſpoſition which tends to produce more. If no acid humours are contained in the firſt paſſages, theſe earthy bodies, not ſoluble by any other kind of fluid, can have no ſalutary operation; and, by concreting with the viſcous contents of the ſtomach into indigeſtible maſſes, may prove injurious in a high degree (*a*).

Abſorbents are of more general uſe in infancy than in adult age; acidities being very familiar to young children, being often in that tender age productive of alarming ſymptoms, and having a greater or leſs ſhare in moſt of their diſeaſes; whereas, in adults, they are much leſs frequent, accompanying chiefly hypochondriacal affections, cardialgiæ, and ſuch diſorders as happen in the firſt paſſages from the immoderate uſe of acid and fermentable food.

An hypotheſis formerly obtained, which aſcribed the acute diſeaſes of adults to a morbific acid: againſt which the abſorbent earths were introduced as the moſt direct alexipharmacs. This theory is now juſtly exploded; theſe diſeaſes, inſtead of being produced, being in general moſt ſucceſsfully controlled, by acids. The uſe of abſorbents, in different kinds of fevers, is nevertheleſs ſtill continued, and ſometimes perhaps with advantage: for, though the earths of themſelves are apparently rather injurious than beneficial, yet as acids are often given freely at the ſame time, the ſolution of the earth in the acid may prove a medicine more ſerviceable in particular caſes than the

(*a*) *Vide* Tralles *Virium terreis remediis aſcriptorum examen rigoroſius.*

acid

acid unobtunded. It is however, doubtleſs, more adviſable, to uſe the earth previouſly diſſolved in the acid, than to give them ſeparately.

The college of Berlin, ſenſible of the advantage of having the earths, in theſe caſes, previouſly diſſolved, or reduced to a ſoluble ſaline form; as well as of the abſurdity, retained in other German pharmacopœias, of precipitating them from their ſolutions by fixt alkaline ſalts, and thus rendering them wholly inert; directs them to be digeſted in diſtilled vinegar, with a gentle heat, till the menſtruum ceaſes to act, and the filtered ſolution to be inſpiſſated to dryneſs. This preparation is greatly preferable to the ſimple imbibition with vinegar or lemon juice recommended by ſome; as by this laſt management the earth is made ſoluble only in part, and in an undeterminable proportion.

Magiſterium ſolubile, coralliorum, perlarum, &c. *P. Brandenb.*

Solutions of theſe earths in vegetable acids are in taſte ſomewhat auſtere. The different earths differ ſomewhat from one another, both in the degree and in the ſpecies of the taſte, and probably alſo in the medical effects, of the ſolutions: but whether theſe differences are ſuch, that ſome of them, as crabs-claws, pearl, coral, and bezoar, are moſt diſpoſed to promote a diaphoreſis in fevers, while others, as egg-ſhells and oyſter-ſhells, act rather by promoting urine, as ſeems to be generally ſuppoſed, has not been determined by fair experience, the earths having rarely been given in a diſſolved or in a ſoluble ſtate. It is moſt probable that they all act, when diſſolved, as mild cooling reſtringents; for when given in ſubſtance, as abſorbents, in caſes of acidities, they all tend to reſtrain fluxes of the belly, or to bring on coſtiveneſs, an

effect

effect to which regard ought to be had in the uſe of them.

There are two ſoluble earths, not commonly ranked among the abſorbents, whoſe effects, when combined with acids, are known with more certainty, as they have been uſed oftener, ſo combined, than otherwiſe; to wit, the aluminous earth and magneſia; of which the one is ſtrongly ſtyptic, and the other moderately purgative.

Combinations of the abſorbent earths with the nitrous and marine acids are bitteriſh and of great pungency, particularly thoſe with the marine: the medical effects of theſe ſolutions are little known. The vitriolic acid does not diſſolve them into a liquid form, but precipitates them from all the others, and is thus combined with them into concretes nearly inſipid.

Experiments have been made for determining the comparative ſtrength of different abſorbents, or the quantities of acid they are capable of ſatiating. Langius reports, that ten grains of crabs-claws deſtroyed the acidity of forty drops of ſpirit of ſalt; that egg-ſhells, crabs-eyes, and mother of pearl, taken in the ſame quantity, ſaturated fifty drops each; red coral, white coral, and fixt alkaline ſalt, ſixty drops each; volatile alkaline ſalt and pearl, eighty drops each; chalk, an hundred drops; oyſter-ſhells, an hundred and twenty; and ſome lime ſtones no leſs than an hundred and ſixty *(a)*. Theſe experiments however (admitting their accuracy, and the acid to have been equally neutralized in all, which may be reaſonably queſtioned) do not anſwer the end ſo perfectly as could be wiſhed; for, to different acids, the earths have different

(a) Vide Langii *Opera omnia medica, Lipſiæ* 1704, *p.* 452 *& ſeq.*

habitudes:

habitudes: from a ſet of experiments made by Homberg, it appears that oyſter-ſhells, for example, require for their ſolution more of the marine acid than coral does; whereas of the nitrous acid, contrariwiſe, the coral requires more than the oyſter-ſhells *(a)*. Neither the nitrous nor the marine acids are thoſe which abſorbents are deſtined to ſatiate in the human ſtomach, and by which their ſtrength ſhould be examined: the acids of the vegetable kingdom, and the acid of milk, may be preſumed to be the moſt analogous to ſuch as are generated in the bodies of animals. On trying, with theſe, the ſeveral ſubſtances enumerated at the beginning of this article, the differences in their abſorbent powers appeared not to be very great: they all ſaturated pretty nearly the ſame quantities of the acids; and there remained, from all, quantities very conſiderable, but not very greatly different, of a matter which further additions of the acid would not diſſolve.

THEA.

TEA: the leaf of a Chineſe ſhrub, *evonymo affinis arbor orientalis nucifera flore roſeo Pluk. alm. Thea bohea & viridis Linn.* The leaves, carefully picked, are dried haſtily on warm iron plates; whereby they are ſaid to loſe in great meaſure ſome noxious qualities which they have when freſh, and to preſerve their admired flavour which by ſlow exſiccation would be loſt. The ſeveral ſorts of tea brought to us are ſuppoſed to be the leaves of the ſame plant, collected at different times, and cured in a

(a) Vide Memoires de l'acad. roy. des ſciences de Paris, pour l'ann. 1700.

ſomewhat

ſomewhat different manner: Neumann ſuſpects that the brown colour, and the flavour, of the bohea ſorts, are introduced by art.

Both the green and bohea teas have an agreeable ſmell, and a lightly bitteriſh ſubaſtringent taſte: with ſolution of chalybeate vitriol, they ſtrike an inky blackneſs. They give out their ſmell and taſte both to watery and to ſpirituous menſtrua: to water, the green ſorts communicate their own green tincture, and the bohea their brown: to rectified ſpirit they both impart a fine deep green. On gently drawing off the menſtrua from the filtered tinctures, the water is found to elevate nearly all the peculiar flavour of the tea, while rectified ſpirit brings over little or nothing, leaving the ſmell as well as the taſte concentrated in the extract: both extracts are very conſiderably aſtringent, and not a little ungrateful; the ſpirituous moſt ſo.

Infuſions of tea, as dietetic articles, have been extravagantly commended by ſome and condemned by others; and notwithſtanding the frequency of their uſe, they real effects are ſcarcely as yet clear. They ſeem, when moderately uſed, to be for the moſt part innocent: in ſome caſes, they ſeem to be ſalutary: in ſome, they are apparently prejudicial. They dilute thick juices and quench thirſt more effectually, and paſs off by the natural emunctories more freely, than mere watery fluids: they refreſh the ſpirits in heavineſs and ſleepineſs, and ſeem to counteract the operation of inebriating liquors. From their manifeſt aſtringency, they have been ſuppoſed to ſtrengthen and brace up the ſolids, but this effect experience does not countenance: it is in diſorders, and in conſtitutions, wherein

corroborants

corroborants are moſt ſerviceable, that the immoderate uſe of tea is peculiarly hurtful; in cold indolent habits, cachexies, chloroſes, dropſies, and debilities of the nervous ſyſtem.

THLASPI.

THLASPI: a plant with oblong narrow undivided leaves joined immediately to the ſtalks, on the tops of which grow numerous tetrapetalous flowers, each of which is followed by a ſhort flat ſeed-veſſel divided tranſverſely into two cells.

1. *Thlaſpi arvenſe ſiliquis latis C. B. Thlaſpi arvenſe Linn.* Treacle-muſtard: with roundiſh-pointed jagged leaves, and broad capſules containing about four ſeeds in each cell. It is annual, and grows wild in corn-fields.

2. *Thlaſpi arvenſe, vaccariæ incano folio majus C. B. Thlaſpi campeſtre Linn.* Mithridate muſtard: with hoary ſharp-pointed leaves ſhaped like an arrow-head; and only one ſeed in each cell. It is biennial, and grows in fields and open clayie grounds.

The ſeeds of theſe plants have an acrid biting taſte, approaching to that of the common muſtard; with which they agree nearly in their pharmaceutic properties, their pungent matter being totally extracted by water, only partially by rectified ſpirit, and being elevated by water in diſtillation. They have, joined to their acrimony, an unpleaſant flavour, ſomewhat of the garlick or onion kind; and this they give out to ſpirituous as well as watery menſtrua. They are rarely made uſe of any otherwiſe than

as

as ingredients in the compoſitions whoſe names they bear: though ſome recommend them in different diſorders, preferably to the common muſtard.

THUS.

THUS Pharm. Lond. Frankincenſe: a ſolid brittle reſin, brought to us in little glebes or maſſes, of a browniſh or yellowiſh colour on the outſide, internally whitiſh or variegated with whitiſh ſpecks. It is ſuppoſed to be the produce of the pine that yields the common turpentine, and to concrete upon the ſurface of the terebinthinate juice ſoon after it has iſſued from the tree.

THIS reſin has a bitteriſh acrid unpleaſant taſte, and no conſiderable ſmell: it diſſolves totally in rectified ſpirit, but is ſcarcely acted upon by watery menſtrua. It may be looked upon as a mild corroborant; though at preſent it is little otherwiſe made uſe of than as an ingredient in theriaca, and externally in plaſters.

Empl. thuris *Pb. Lond.* An officinal plaſter, made with half a pound of frankincenſe and three ounces of dragons blood in powder ſtirred into two pounds of the common plaſter melted, now takes its name which was formerly *roborans*, from this ingredient.

THYMELÆA.

THYMELÆA Pharm. Pariſ. A ſhrubby plant; with ſmooth uncut leaves; and monopetalous flowers ſet thick together: each flower is cut into four acute ſections, and followed by an oblong, red, yellow, or black berry, containing one ſeed, which reſembles a hemp-ſeed.

1. THYMELÆA

1. THYMELÆA: *Thymelæa foliis lini C. B. Daphne Gnidium Linn.* Spurge-flax: with the ſtalks and branches clothed with evergreen leaves like thoſe of flax; and white flowers in cluſters on the tops.

2. LAUREOLA *ſeu Chamælæa: Laureola ſempervirens flore viridi, quibuſdam laureola mas C. B. Daphne laureola Linn.* Spurge laurel: with evergreen ſhining bay-like leaves, ſtanding ſeveral together, only at the tops of the branches; and greeniſh flowers on pedicles in their boſoms.

3. MEZEREUM *Pharm. Lond. Mezereon Pharm. Edinb. Laureola folio deciduo, flore purpureo, officinis laureola femina C. B. Daphne Mezereum Linn.* Spurge-olive, widow-wail: with pale purpliſh or white flowers clothing the branches; on the tops of which appear, after the flowers have fallen, bay-ſhaped leaves not ſhining.

The firſt of theſe plants grows on mountainous places in the ſouthern parts of Europe: the ſecond in moiſt woods in ſome parts of England: the third, a native of Germany *(a)*, is cultivated in our gardens, on account of the elegance and earlineſs of its flowers, which ſometimes appear in the end of January: the berries of all the ſorts ripen in Auguſt or September.

The leaves of theſe plants have little or no ſmell, but a nauſeous, acrid, very durable taſte: taken internally, in ſmall doſes, as ten or twelve grains, they are ſaid to operate with

(a) The mezereon has of late been obſerved to be a native of England alſo, being found plentifully in ſome woods near Andover in Hampſhire.

violence,

violence, by ſtool, and ſometimes by vomit, ſo as not to be ventured on with ſafety unleſs their virulence be previouſly abated by long boiling, and even then they are much too precarious to be truſted to.

The flowers are of a different nature, being in taſte little other than mucilaginous and ſweetiſh, and of a light pleaſant ſmell.

The pulpy part of the berries appears alſo to be harmleſs; but the ſeeds, called *coccognidia* or *grana cnidia*, are as acrid, and as virulently purgative as the leaves.

*The bark of the ſpurge laurel, macerated in water, has of late been much employed in France as a topical application to the ſkin, for the purpoſe of excoriating and exciting a diſcharge. That of the mezereon has been recommended for the ſame purpoſe.

The root of the mezereon has lately been uſed with ſucceſs in caſes of venereal nodes. Dr. Ruſſel, to whom the public is obliged for the communication of its efficacy in this frequently obſtinate complaint, obſerves, in the medical inquiries above-mentioned, that the cortical part of the root, on firſt chewing, is not pungent, but after a little time proves greatly ſo; and that the diſagreeable ſtimulus in the fauces laſts for many hours: that a decoction of an ounce of the freſh cortical part in a gallon and a half of water (the boiling being continued till half a gallon is waſted, and an ounce of ſliced liquorice added towards the end) may be taken to the quantity of half a pint four times a day, is not nauſeous to the taſte, and has not been found to diſagree with any ſtomach or conſtitution, or to remarkably increaſe any of the ſecretions; but that on doubling the quantity of the mezereon, the decoction proved ſo pungent, that

that no ſtomach could bear it. He recommends the above decoction principally in thoſe venereal nodes that proceed from a thickening of the membrane of the bones, which appears to be the cauſe of greateſt part of theſe tumours, at leaſt when recent: when there is an exoſtoſis, nothing is to be hoped for from this medicine; and when the bone is carious, no cure is to be expected without an exfoliation, though even here it ſometimes diſperſes the tumour, as appears from ſome of the caſes which he relates. In a thickening of the perioſteum from other cauſes, it has likewiſe had good effects.

THYMIAMA.

THYMIAMATIS cortex Officinarum Germaniæ: Thus judæorum quorundam. A bark, in ſmall browniſh-grey pieces, intermixed with bits of leaves, ſeeming as if the bark and leaves had been bruiſed and preſſed together; brought from Syria, Cilicia, *&c.* and ſuppoſed to be the produce of the liquid-ſtorax tree.

This bark has an agreeable balſamic ſmell, approaching to that of liquid-ſtorax, and a ſubacrid bitteriſh taſte accompanied with ſome ſlight aſtringency. Infuſions of it in water are of an orange colour, in taſte and ſmell ungratefully balſamic: inſpiſſated, they leave a dark reddiſh brown extract, retaining ſome of the ſmell of the bark, in taſte auſtere, ſlightly bitter, and of a mild aromatic acrimony. To rectified ſpirit it communicates a dark colour like that of a ſolution of balſam of Peru: the ſpirit, diſtilled off from this tincture, is highly fragrant, inſomuch that a dram communicates an agreeable odour to ſome quarts of water: the remaining extract is likewiſe of a pleaſant ſmell, and amounts to at leaſt one eighth of the weight of the bark.

This bark, ſaid to be common in the German ſhops, is in this country very rarely to be met with. Cartheuſer and Hoffman, from whom the above account is extracted, report, that it affords an excellent fumigation for œdemas, rheumatiſms, and catarrhs; and that the ſpirituous tincture and extract, and the diſtilled ſpirit, are uſeful anodynes or antiſpaſmodics in convulſive coughs and other diſorders.

THYMUS.

THYME: a low ſhrubby plant; conſiſting of numerous ſlender tough ſtalks, with little roundiſh leaves in pairs, and looſe ſpikes, on the tops, of purpliſh or whitiſh labiated flowers, whoſe upper lip is nipt at the extremity, the lower divided into three nearly equal ſegments.

1. THYMUS *Pharm. Edinb. Thymum vulgare folio tenuiore C. B. Thymus vulgaris Linn.* Common thyme: with upright ſtalks, and dark browniſh green ſomewhat pointed leaves; a native of the ſouthern parts of Europe, common in our gardens, and flowering in June and July.

This herb is a moderately warm pungent aromatic. To water it imparts, by infuſion, its agreeable ſmell, but only a weak taſte, with a yellowiſh or brown colour: in diſtillation, it gives over an eſſential oil, in quantity about an ounce from thirty pounds of the herb in flower, of a gold yellow colour if diſtilled by a gentle fire, of a deep browniſh red if by a ſtrong one, of a penetrating ſmell reſembling that of the thyme itſelf, but leſs grateful, in taſte exceſſively hot and fiery: the remaining decoction, inſpiſſated, leaves a bitteriſh, roughiſh, ſubſaline extract. The active matter, which by water is only partially diſſolved, is by rectified

ſpirit

ſpirit diſſolved completely; though the tincture, in colour blackiſh-green, diſcovers leſs of the ſmell of the thyme than the watery infuſion: the ſpirit brings over in diſtillation a part of its flavour, leaving an extract of a weak ſmell and of a penetrating camphorated pungency.

2. SERPYLLUM *Pharm. Edinb. Serpyllum vulgare minus C. B. Thymus Serpyllum Linn.* Mother-of-thyme: with trailing ſtalks, and obtuſe leaves: growing wild on heaths and dry paſture grounds. This alſo is an elegant aromatic plant, ſimilar to the foregoing ſpecies, but milder, and in flavour rather more grateful. Its eſſential oil is both in ſmaller quantity and leſs acrid, and its ſpirituous extract comes greatly ſhort of the penetrating warmth and pungency of that of the other. It is ſaid to afford an agreeable diſtilled water, more durable, but leſs active and penetrating than peppermint*(a)*. Both the leaves themſelves, and their ſpirituous tincture, are of a bright green colour, without any thing of the brown or blackiſh hue of thoſe of common thyme.

3. THYMUS CITRATUS *Serpyllum foliis citri odore C. B.* Lemon-thyme: in appearance differing little from the ſecond ſort, of which Linnæus makes it a variety, except that it is more upright and more buſhy; a native of dry mountainous places, common in gardens, and flowering as the others in July. This ſpecies is leſs pungent than the firſt ſort, more ſo than the ſecond, and much more grateful than either: its ſmell in particular is remarkably different, approaching to that of lemons. Diſ-

(a) Cullen, *Mat. Med.*

tilled with water, it yields a larger quantity than the other ſorts, of a yellowiſh very fragrant oil of the lemon flavour, containing nearly all the medicinal parts of the plant, for the remaining decoction is almoſt inſipid as well as inodorous. It gives over alſo with rectified ſpirit its finer odorous matter; a leſs agreeable flavour, and a moderate warmth, remaining in the ſpirituous extract.

TILIA.

TILIA femina folio majore C. B. Tilia europæ Linn. LIME or LINDEN: a tall ſpreading-branched tree, with large heart-ſhaped, ſerrated, ſoft, ſomewhat hairy leaves: in the boſoms of theſe riſe long narrow leafy productions, from the middle rib of which iſſue one or three pedicles bearing three flowers apiece, or one pedicle bearing nine: the flower is whitiſh, pentapetalous, and followed by a kind of dry berry about the ſize of a filberd. It is a native of England, flowers in July, and begins to loſe its leaves in Auguſt.

THE flowers of the lime-tree are ſuppoſed to have an anodyne and antiſpaſmodic virtue: Hoffman ſeems to entertain a great opinion of them in theſe intentions, and as his theory deduces moſt diſeaſes from ſpaſms and ſpaſmodic ſtrictures, they are accordingly very frequent in his preſcriptions: he ſays he knew a chronical epilepſy cured by the uſe of an infuſion of them drank as tea. The freſh flowers have a moderately ſtrong ſmell, in which their virtue (whatever it may be) ſeems to conſiſt, and which in keeping is ſoon diſſipated: when diveſted of this odorous principle, they diſcover to the taſte only

only a ſtrong mucilage, from which may be extracted, by rectified ſpirit, a ſlightly bitteriſh ſubaſtringent matter.

TITHYMALUS.

SPURGE: a plant with ſmall ſmooth leaves, round ſtalks full of a milky juice, and umbel-like cluſters of tetrapetalous flowers, whoſe cups are divided into four ſegments ſet alternately with the petala: the flower is followed by a roundiſh or three-ſquare capſule containing three ſeeds.

1. TITHYMALUS PARALIOS: *Tithymalus maritimus C. B. Euphorbia Paralias Linn.* Sea ſpurge: with oblong narrow flax-like leaves, broadeſt in the middle, clothing the ſtalks, and lying over one another in an upward direction, like ſcales; and two roundiſh, heart-ſhaped, or kidney-ſhaped leaves encompaſſing each of the ſubdiviſions of the umbel: found wild on ſandy ſhores, and flowering in June. All the parts of this plant are extremely acrid irritating cathartics; apt to inflame the mouth, fauces, and ſtomach; operating with ſo great violence, that though ſome may perhaps have borne their operation without much injury to the conſtitution, yet common prudence forbids their being ever ventured on. Several correctors have been employed for them, but none with commendable ſucceſs: maceration of the middle bark of the root in vinegar, directed by the faculty of Paris, renders it indeed leſs virulent, but of precarious operation: digeſtion of the milky juice with alkaline ſalts, recommended by others, leaves it ſtill too acrid. For alleviating inflammatory ſymptoms produced by imprudently

dently ſwallowing or taſting theſe acrid ſubſtances, milk, plentifully drank, ſeems the moſt effectual remedy. Gerard relates, that on taking but one drop of the milk of the ſea ſpurge, it did ſo ſwell and inflame in his throat, that he hardly eſcaped with his life, and that on drinking milk, the extremity of the heat ceaſed.

2. TITHYMALUS CYPARISSIUS *C. B. Euphorbia Cyparissias Linn.* Cypreſs ſpurge: with numerous oblong ſlender leaves, not wider in the middle than at the ends; the umbel divided into numerous ramifications, each of which is divided and ſubdivided into two; the diviſions perforating as it were the two roundiſh leaves which encompaſs them; a native of Germany, Switzerland, and ſome other parts of Europe. This ſpecies, though allowed by the faculty of Paris to be uſed indiſcriminately with the preceding, is in all its parts leſs acrimonious. Poterius ſays he has found half a dram or a dram of the powdered root to act as a mild cathartic; and that the juice obtained from the bruiſed herb and root, depurated and exſiccated in the ſun, is of the ſame operation with ſcammony *(a)*.

SEVERAL other ſpurges are enumerated in catalogues of the materia medica, under the names of *eſula*, *pityuſa*, *cataputia*, *lathyrus*, *alypum*, *peplus*, *apios*, &c. among which there does not appear to be any one more virulent than the firſt above deſcribed, or leſs virulent than the ſecond. None of them are among us ventured on for any internal uſe: the milky juice

(a) Pharmacopœia ſpagyrica, lib. iii. *ſect.* 3.

of

of the wild ſpurges is ſometimes applied externally by the common people for conſuming warts.

TORMENTILLA.

TORMENTILLA Pharm. Lond. & Edinb. Tormentilla ſylveſtris C. B. Heptaphyllum. Tormentilla erecta Linn. TORMENTIL or SEPTFOIL: a plant with ſlender, weak, upright ſtalks; oblong leaves, indented towards the extremity, and converging from the indented part to their juncture with the ſtalk, ſtanding generally ſeven at a joint; and ſmall yellow tetrapetalous flowers on the tops of the branches, followed by naked ſeeds; the root is generally crooked and knotty, of a dark brown or blackiſh colour on the outſide, and reddiſh within. It is perennial, grows wild in woods and on commons, and flowers in June.

TORMENTIL ROOT is a ſtrong and almoſt flavourleſs aſtringent, and gives out its aſtringency both to water and rectified ſpirit, moſt perfectly to the latter: the watery decoction, of a tranſparent browniſh red colour whilſt hot, becomes turbid in cooling like that of the Peruvian bark, and depoſites a portion of reſinous matter: the ſpirituous tincture, of a brighter reddiſh colour, retains its pellucidity. The extracts, obtained by inſpiſſation, are intenſely ſtyptic, the ſpirituous moſt ſo. It is generally given in decoction: an ounce and a half of the powdered root may be boiled in three pints of water to a quart, adding, towards the end of the boiling, a dram of cinnamon; of the ſtrained liquor, ſweetened with an ounce of any agreeable ſyrup, two ounces or more may be taken four or five times a day.

TRICHOMANES.

TRICHOMANES Pharm. Edinb. Polytrichum ſive trichomanes C. B. Callitrichum. Aſplenium Trichomanes Linn. ENGLISH MAIDENHAIR: a ſmall plant, without ſtalks: the leaves are long, narrow, compoſed of little roundiſh dark-green ſegments ſet in pairs along a ſhining black rib: the ſeeds are a fine duſt lying on the backs of the leaves. It is perennial, and grows wild on ſhady grounds and old walls.

THIS herb has a mucilaginous ſomewhat ſweetiſh and roughiſh taſte, and little or no particular flavour. It is accounted ſerviceable in diſorders of the breaſt, particularly in tickling coughs and hoarſeneſs from thin acrid defluxions, and in theſe intentions has been long ſubſtituted among us to the *adianthum*, from which it appears to be very little, if at all, different in quality. It is uſually directed in infuſion or decoction, with the addition of a little liquorice: a pectoral ſyrup is prepared in the ſhops, from an infuſion of five ounces of the dry leaves and four of liquorice root in five pints of boiling water.

Syrup. pectoralis.

TRIFOLIUM PALUDOSUM.

TRIFOLIUM PALUDOSUM Pharm. Lond. Menyanthes Pharm. Edinb. Trifolium paluſtre C. B. Menyanthes Trifoliata Linn. BUCKBEAN: a plant with large oval leaves, pointed at each end like thoſe of the garden bean, ſet three together on long pedicles, which embrace the ſtalk to ſome height, and there parting leave it naked to near the top, where iſſues a ſhort ſpike of

of pretty large reddiſh white monopetalous flowers, each of which is cut into five ſegments, hairy on the inſide, and followed by an oval ſeed-veſſel. It is perennial, grows wild in marſhy places, and flowers in May.

THE leaves of buckbean have a bitter penetrating taſte, which they impart both to watery and ſpirituous menſtrua; without any remarkable ſmell or flavour. They have of late years come into common uſe, as an alterative and aperient, in impurities of the humours, and ſome hydropic and rheumatic caſes. They are uſually taken in the form of infuſion, with the addition of ſome of the acrid antiſcorbutic herbs, which in moſt caſes improve their virtue, and of orange peel or ſome other grateful aromatic to alleviate their ill taſte: they are ſometimes, among the common people, fermented with malt liquors, for an antiſcorbutic diet drink. Their ſenſible operation is by promoting urine and ſomewhat looſening the belly.

TURPETHUM.

TURPETHUM ſive Turbith. TURBITH: the cortical part of a ſpecies of convolvulus (*Convolvulus Turpethum Linn.*), brought from the Eaſt Indies, in oblong pieces, of a brown or aſh colour on the outſide and whitiſh within: the beſt is ponderous, not wrinkled, eaſy to break, and diſcovers to the eye a large quantity of reſinous matter.

THIS root, on the organs of taſte, makes at firſt an impreſſion of ſweetneſs; but when chewed for ſome time, betrays a nauſeous acrimony. It is accounted a moderately ſtrong cathartic,

cathartic, but does not appear to be of the safest or most certain kind; the resinous matter, in which its virtue resides, being very unequally distributed; insomuch that, as is said, some pieces taken from a scruple to a dram, purge violently, whilst others, in larger doses, have very little effect.

TUSSILAGO.

TUSSILAGO Pharm. Lond. & Edinb. Tussilago vulgaris C B. Farfara Bechium & ungula caballina quibusdam. Tussilaga Farfara Linn. Coltsfoot: a low plant, producing early in the spring single stalks, each of which bears a yellow flosculous flower followed by several seeds winged with down: the leaves which succeed the flowers, are short, broad, somewhat angular, slightly indented, green above, and hoary underneath. It is perennial, and grows wild in moist grounds.

The leaves and flowers of coltsfoot, in taste somewhat mucilaginous, bitterish, and roughish, and of no remarkable smell, are ranked among the principal pectoral herbs. Infusions of them, with a little liquorice or with the other herbs of similar intention, are drank as tea, and sometimes with considerable benefit, in catarrhous disorders and coughs threatning consumptions. They have been found serviceable in hectics and colliquative diarrhœas *(a)*.

TUTIA.

TUTIA Pharm. Lond. & Edinb. Tutia alexandrina. Tutty: an argillaceous ore of

(a) Percival, *Eff. Med. and Exp.* II. 224.

zinc,

zinc, found in Perſia; formed on cylindrical moulds into tubulous pieces like the bark of a tree, and baked to a moderate hardneſs *(a)*; generally of a browniſh colour and full of ſmall protuberances on the outſide, ſmooth and yellowiſh within, ſometimes whitiſh, and ſometimes with a bluiſh caſt. Like other argillaceous bodies, it becomes harder in a ſtrong fire; and after the zinc has been revived and diſſipated by inflammable additions, or extracted by acids, the remaining earthy matter affords, with oil of vitriol, an aluminous ſalt (ſee *Bolus* and *Calaminaris*).

TUTTY, levigated into an impalpable powder, is, like the lapis calaminaris and calces of zinc, an uſeful ophthalmic, and frequently uſed as ſuch in ointments and collyria. Ointments for this intention are prepared in the ſhops, by mixing the levigated tutty with ſo much ſpermaceti ointment as is ſufficient to reduce it to a due conſiſtence†; or by adding one part to five parts of a ſimple liniment made of oil and wax ‡.

Tutia præparata *Ph. Lond. & Ed.*

Ung. tutiæ † *Ph. Lond.* ‡ *Ph. Ed.*

VALERIANA.

VALERIANA ſilveſtris Ph. Lond. & Edinb. Valeriana ſilveſtris major montana C. B. Valeri-

(a) The above account of the origin of tutty is ſupported by the authority of Teixeira and Douglas, and by its chemical properties. That the common opinion, of its being a ſublimate produced in the European founderies where zinc is melted with other metals, is erroneous, appears from hence; that tutty is not found, upon ſtrict inquiry, to be known at thoſe founderies; and by its conſiſting in great part of an earth not capable of riſing in ſublimation. Thus much, however, is probable, that ſublimates or the common ores of zinc are often mixed with argillaceous earths and baked hard, in imitation of the genuine oriental tutty.

ana

ana officinalis Linn. WILD VALERIAN: a plant with channelled ſtalks; the leaves in pairs; each leaf compoſed of a number of long narrow ſharp-pointed ſegments, indented about the edges, of a dull green colour, ſet along a middle rib, which is terminated by an odd one; producing, on the tops of the ſtalks, umbel-like cluſters of ſmall monopetalous flowers, each of which is divided into five ſegments, ſet in a very little cup, and followed by a ſingle naked ſeed winged with down: the root conſiſts of tough ſtrings with numerous ſmaller threads, matted together, iſſuing from one head, of a duſky browniſh colour approaching to olive. It is perennial, and grows wild in dry mountainous places.

Another ſpecies, or variety, of wild valerian, is met with in moiſt watery grounds, diſtinguiſhable by the leaves being broader and of a deep gloſſy green colour. Both ſorts have been uſed indiſcriminately; but the mountain ſort is by far the moſt efficacious, and is therefore expreſsly ordered for the officinal ſpecies by the London college.

THE mountain valerian root has a ſtrong not agreeable ſmell, and an unpleaſant warm bitteriſh ſubacrid taſte: the ſtrength of the ſmell and taſte is the only mark to be depended on of its genuineneſs and goodneſs. It is a medicine of great eſteem in the preſent practice againſt obſtinate hemicraniæ, hyſterical, and the different kinds of nervous diſorders, and is commonly looked upon as one of the principal antiſpaſmodics. Columna reports, that he was cured by it of an inveterate epilepſy after many other medicines had been uſed in vain: on more extenſive trials it has been found, in ſome epileptic

epileptic caſes, to effect a cure, in ſeveral to abate the violence or frequency of the fits, and in many to prove entirely ineffectual: oftentimes, it either purges, or operates by ſweat or by urine, or brings away worms, before it prevents a fit. The doſe of the root in powder is from a ſcruple to a dram or two, which may be repeated, if the ſtomach will bear it, two or three times a day. * A remarkable inſtance of its efficacy in a catalepſy is given by Mr. Mudge *(a)*: doſes of half an ounce of the powder were exhibited twice a day, and a leſs quantity was found ineffectual.

The powdered root, infuſed in water or digeſted in rectified ſpirit, impregnates both menſtrua ſtrongly with its ſmell and taſte, and tinges the former of a dark brown, the latter of a browniſh red colour. Water diſtilled from it ſmells conſiderably of the root, but no eſſential oil ſeparates, though ſeveral pounds be ſubmitted to the operation at once: the extract obtained by inſpiſſating the watery infuſion, has a pretty ſtrong taſte, diſagreeably ſweetiſh and ſomewhat bitteriſh: the ſpirituous extract is leſs diſagreeable, and more perfectly reſembles the root itſelf: the quantity of watery extract is about one fourth the weight of the root; of the ſpirituous, about one eighth. Tinctures of it are prepared in the ſhops, by digeſting four ounces of the powdered valerian in a quart of proof ſpirit †; in the ſame quantity of the volatile aromatic ſpirit ‡; or of the dulcified ſpirit of ſal ammoniac ‖. The root in ſubſtance, however, is generally found to be more effectual than any preparation of it. Among the mate-

Tinct. valer. ſimp. † *Ph. Lond.* — volat. ‡ *Ph. Lond.* ‖ *Ph. Ed.*

(a) On the *Vis Vitæ*, &c.

rials

rials I have made trial of for covering its flavour, mace ſeemed to anſwer the beſt.

VANILLA.

VANILLA ſeu Banilia Pharm. Pariſ. Aracus aromaticus. VANELLOE: the fruit of a climbing plant *(volubilis ſiliquoſa mexicana foliis plantaginis Raii hiſt. Epidendrum Vanilla Linn.)* growing in the Spaniſh Weſt Indies. It is a long flattiſh pod, containing, under a wrinkled brittle ſhell, a reddiſh brown pulp, with ſmall ſhining black ſeeds.

VANELLOES have an unctuous aromatic taſte, and a fragrant ſmell like that of ſome of the finer balſams heightened with muſk. They are uſed chiefly in perfumes; ſcarcely ever, among us at leaſt, in any medical intention; though they ſhould ſeem to deſerve a place among the principal medicines of the nervous claſs. By diſtillation, they impregnate water ſtrongly with their fragrance, but give over little or nothing with pure ſpirit: by digeſtion, ſpirit totally extracts their ſmell and taſte, and in great meaſure covers or ſuppreſſes the ſmell.

VERBASCUM.

VERBASCUM Pharm. Edinb. Verbaſcum mas latifolium luteum C. B. Tapſus barbatus Candelaria & lanaria quibuſdam. Verbaſcum Thapſus Linn. MULLEIN: a large plant, all over white and woolly; with a ſingle woody ſtalk, clothed with oblong oval leaves joined to it without pedicles, bearing on the top a long ſpike of large yellow monopetalous flowers cut into five ſegments, and followed by conical

ſeed

ſeed-veſſels. It is biennial, grows wild by road-ſides, and flowers in July.

THE leaves of mullein, recommended as mild aſtringents, have a roughiſh drying kind of taſte, and very little ſmell. The flowers have alſo a ſlight roughiſhneſs, with a conſiderable ſweetneſs. A decoction of the leaves has lately been uſed with ſome ſucceſs in diarrhœas *(a)*.

VERBENA.

VERBENA communis flore cæruleo C. B. Hierobotane, herba ſacra, herba cephalalgica & periſterium quibuſdam. Verbena officinalis Linn. VERVAIN: a plant with wrinkled, oblong, obtuſe leaves, deeply jagged and indented, ſet in pairs on the ſtalks, the upper ones divided into three ſegments: on the tops of the branches appear irregularly labiated blue flowers, in long ſpikes, without any leaves among them, followed each by four ſeeds incloſed in the cup. It is annual, grows wild in uncultivated places, and flowers in July or Auguſt.

This herb has been celebrated for abundance of virtues, for which its ſenſible qualities afford little or no foundation. It has no remarkable ſmell, and hardly any taſte.

VERONICA.

VERONICA: a low, ſomewhat hairy, trailing plant, with firm leaves ſet in pairs: from the joints ariſe ſlender pedicles, bearing ſpikes of blue monopetalous flowers, each of which is divided, as is the cup, into four ſegments, and

(a) Home's *Clin. Caſ. and Exp.*

followed

followed by a flat bicellular capsule, which opens at the upper broad part and sheds small brown seeds.

1. VERONICA MAS *sive Betonica pauli. Veronica mas supina & vulgatissima C. B. Thea Germanica quibusdam. Veronica officinalis Linn.* Male speedwell: with crenated leaves of a roundish oval figure; those on the flowering twigs, long, narrow, and not crenated. It is perennial, and grows wild on sandy grounds and dry commons.

The leaves of veronica have a weak not disagreeable smell, which in drying is dissipated, and which they give over in distillation with water, but without yielding any separable oil. To the taste they are bitterish and roughish: an extract made from them by rectified spirit is moderately bitter and subastringent: the watery extract is weaker, though the quantity of both is nearly the same; whence spirit seems to extract their virtue more completely than water. This herb is of great esteem among the Germans; in disorders of the breast both catarrhous and ulcerous, and for purifying the blood and humours: infusions of the leaves, which are not unpalatable, are drank as tea, and are found to operate sensibly by urine.

2. TEUCRIUM *Act. med. berolinens. Chamædrys spuria major angustifolia C. B. Veronica Teucrium Linn.* Mountain speedwell: with sharply serrated leaves of a long oval figure; the lower embracing the stalk by a broad basis. It is a native of Germany.

The leaves and flowers of this species have been greatly commended for dietetic infusions; and said to promote perspiration and urine, to be

be in general ſalubrious, and medicinal in ſeveral diſorders(a). Cartheuſer obſerves, that they impart to boiling water a greeniſh colour, a pleaſant balſamic ſmell, and a much more agreeable taſte than the preceding veronica. Among us they have not yet been introduced, nor is the plant common: what has uſually been called *teucrium* is a plant of another genus, a large ſpecies of germander.

VINCETOXICUM.

VINCETOXICUM, Aſclepias, Hirundinaria. Aſclepias albo flore C. B. Aſclepias Vincetoxicum Linn. Swallow-wort, tame-poiſon: a plant with unbranched ſtalks; ſmooth oblong acuminated leaves ſet in pairs, and cluſters of white monopetalous flowers, each of which is divided into five ſections, and followed by two long pods full of a white cottony matter with ſmall browniſh ſeeds: the root is large, compoſed of a great number of ſlender ſtrings hanging from a tranſverſe head, externally browniſh, internally white. It is perennial, grows wild in gravelly grounds in ſome parts of England, and flowers in July.

The root of vincetoxicum has, when freſh, a moderately ſtrong not agreeable ſmell, approaching to that of wild valerian, which in drying is in great part diſſipated; chewed, it impreſſes firſt a conſiderable ſweetneſs, which is ſoon ſucceeded by an unpleaſant ſubacrid bitteriſhneſs: an extract made from it by water, is moderately ſweetiſh, balſamic, and bitteriſh; the ſpirituous extract is ſtronger in taſte, proportionably ſmaller in quantity, and retains a

(a) Gohl, *Acta medica Berolinenſ. dec.* I. *vol.* ii. *n.* 5.

part of the ſpecific flavour of the root. It is recommended as reſolvent, ſudorific, and diuretic; in catarrhal, cachectic, and ſcrophulous diſorders, and in uterine obſtructions; in doſes of from a ſcruple to a dram or more in ſubſtance, and three or four drams in infuſion. It has been employed by ſome of the Germans as an alexipharmac, and hence received the name of *contrayerva Germanorum*. Some have however ſuſpected it to poſſeſs noxious qualities, and obſerve that when freſh it excites vomiting. Among us it is ſcarcely ever made uſe of in any intention.

VINUM.

WINE: the fermented juice of the grape. It differs in colour, flavour, and ſtrength, partly from differences in the grape itſelf, but chiefly from different managements or additions. Five ſorts are employed in the ſhops as menſtrua for medicinal ſubſtances: *Vinum album*, Mountain: *Vinum album gallicum*, French white wine: *Vinum canarinum*, Canary or ſack: *Vinum rhenanum*, Rheniſh: *Vinum rubrum*, Red Port.

Media ſubſtantia vini Beccheri.

All wines conſiſt of an inflammable ſpirit, and water, ſeparable by diſtillation; an unctuous viſcid ſubſtance, which abounds particularly in the ſweet wines, as Canary, and impedes their diſſolving power; and an acid, obvious in ſome to the taſte, as in Rheniſh, which hence becomes an uſeful menſtruum for ſome bodies of the metallic kind, particularly iron and the antimonial regulus. In diſtillation, after the inflammable ſpirit has ariſen, they all yield more or leſs of a peculiar grateful acid; a groſſer tartareous acid remaining in the ſtill, along with

with the unctuous and mucilaginous matter. In long keeping, a part of the tartar is thrown off from the wine, and incruſtates the ſides of the caſk.

Wine, conſidered as a medicine, is a valuable cordial in languors and debilities; more grateful and reviving than the common aromatic infuſions and diſtilled waters, particularly uſeful in the low ſtage of malignant or other fevers, for raiſing the pulſe and ſupporting the vis vitæ, promoting a diaphoreſis, and reſiſting putrefaction. Dietetically, its moderate uſe is of ſervice to the aged, the weak, and the relaxed, and to thoſe who are expoſed to warm and moiſt, or to corrupted air: in the oppoſite circumſtances, it is leſs proper, or prejudicial. Externally, it is uſed as a corroborant, antiſeptic, and antiphlogiſtic fomentation.

The acid obtained from wine by diſtillation, apparently of a different nature from the acetous as well as from the native vegetable acids, ſeems to deſerve ſome regard, both as a medicine, and as a more elegant menſtruum, for iron and ſome other bodies, than the common acids.

With regard to the medical differences of wines, it may be obſerved, that the effects of the full-bodied are much more durable than thoſe of the thinner: that all ſweet wines are in ſome degree nutritious; the others not at all, or only accidentally ſo, by promoting appetite and ſtrengthening the organs concerned in digeſtion: that ſweet wines in general do not paſs freely by urine, and that they heat the conſtitution more than an equal quantity of any other, though containing full as much ſpirit: that thoſe which are manifeſtly acid paſs freely by the kidneys, and gently looſen the belly; and

that moſt of the red ones are ſubaſtringent, and tend to reſtrain immoderate excretions.

VIOLA.

VIOLA Pharm. Lond. & Edinb. Viola martia purpurea flore ſimplici odoro C. B. Violaria. Viola odorata Linn. VIOLET: a low creeping plant, without any other ſtalk than the pedicles of the leaves and flowers: the leaves are roundiſh, ſomewhat heart-ſhaped, obtuſely crenated about the edges: the flower conſiſts of five irregular petala, of the deep purpliſh blue called, from the name of the plant, violet colour: the fruit is a little capſule divided into three cells, full of ſmall roundiſh ſeeds. It is perennial, grows wild in hedges and ſhady places, and flowers in March.

The flowers of a different ſpecies, greatly inferiour to the above, are frequently ſubſtituted in our markets. This ſort may be readily diſtinguiſhed; the herb, by its having ſtalks, which trail on the ground, and bear both leaves and flowers, and by the young leaves being hairy; the flower, by the three lower petala being ſpotted with white, and by their want of ſmell.

THE officinal violet flowers have a very agreeable ſmell, and a weak mucilaginous bitteriſh taſte. Taken to the quantity of a dram or two, they are ſaid to be gently laxative or purgative; and the ſeeds, which have more taſte than the flowers, to be more purgative, and ſometimes emetic. The flowers give out to water both their virtue and their fine colour, but ſcarcely impart any tincture to rectified ſpirit, though they impregnate the ſpirit with their fine flavour, and probably alſo with their purgative quality.

quality. An infuſion of two pounds of the freſh flowers in five† or eight‡ pints of boiling water, paſſed through a fine linen cloth without preſſure, is made in the ſhops into a ſyrup, which proves an agreeable laxative for children. Both the flowers themſelves and the ſyrup loſe their colour in being long kept: acids change them inſtantly into a red; alkalies, and ſundry combinations of acids with earthy and metallic bodies, to a green: perfect neutral ſalts, or thoſe compounded of an acid and alkali, make no alteration. Some have been accuſtomed to communicate to ſyrups a violet colour with materials of greater durability than the violet itſelf, or than any other blue flower: theſe ſophiſticated preparations may be diſtinguiſhed by their colour withſtanding alkalies and acids, or being affected by them in a different manner.

Syr. violar.
† *Ph. Lond.*
‡ *Ph. Ed.*

*VIOLA TRICOLOR *Linn.* Panſies, or hearts-eaſe: this well known plant has lately been recommended by a German phyſician, Dr. Strack, as a ſpecific in the *cruſta lactea* of children. He directs a handful of the freſh, or half a dram of the dried leaves to be boiled in half a pint of milk, which is to be ſtrained for uſe. This doſe is repeated morning and evening. He obſerves, that when it has been adminiſtered eight days, the eruption uſually increaſes conſiderably, and the patient's urine acquires a ſmell like that of cats. When the medicine has been taken a fortnight, the ſcurf begins to fall off in large ſcales, leaving the ſkin clean. The remedy is to be perſiſted in, till the ſkin has reſumed its natural appearance, and the urine ceaſes to have any particular ſmell.

VIPERA.

VIPERA Pharm. Edinb. Coluber Berus Linn. THE VIPER or ADDER, a viviparous reptile, about an inch or leſs in thickneſs, and twenty or thirty in length, with a ſmall ſharp-pointed tail. It is found in the heat of ſummer, under hedges in unfrequented places; and in winter retires into holes in the earth.

The poiſon of this ſerpent is confined to its mouth. At the baſis of the phangs, or long teeth which it wounds with, is lodged a little bag containing the poiſonous liquid; a very minute portion of which, if mixed immediately with the blood, proves fatal; though it does not appear to be pernicious when ſwallowed, provided there is no ſolution of continuity in the parts which it comes in contact with *(a)*. Our viper-catchers are ſaid to prevent the miſchiefs otherwiſe following from the bite, by rubbing oil-olive warm upon the part.

The fleſh of the viper is perfectly innocent, and has been greatly commended as a medicine in ſundry diſorders. It appears to be very nutritious, and hence an uſeful reſtorative in ſome kinds of weakneſſes and emaciated habits; but in ſcrophulous, leprous, and other like diſtempers, the good effects, which have been aſcribed to it, are more uncertain: I have known a viper taken every day for above a month, in diſorders of the leprous kind, without any apparent benefit. The form in which they are uſed to beſt advantage, is that of broth, that the wines (made commonly by macerating for a week, with a gentle heat, two ounces of

(a) See Dr. Mead's *Mechanical account of poiſons, eſſay* i.

the

the dried flesh in three pints of mountain) have any great virtue, cannot perhaps be affirmed from fair experience.

The fat of the viper is accounted particularly useful in disorders of the eyes; but what advantages it has above other soft fats, is by no means clear: see *Pinguedo*. It was formerly supposed to have some specific power of resisting the poison of the viper's bite, by being rubbed immediately on the part; but experience has now shewn that common oil is in this intention of equal efficacy.

VIRGA AUREA.

VIRGA AUREA angustifolia minus serrata C. B. Herba doria & Consolida saracenica quibusdam. Solidago Virga aurea Linn. GOLDEN ROD: a plant with long somewhat oval leaves, pointed at both ends, slightly or not at all indented; and upright spikes, along the stalks, of small yellow flowers, composed of several flosculi set in scaly cups, followed by small seeds winged with down. It is perennial, grows wild in woods and on heaths, and flowers in August.

THE leaves and flowers of golden rod are recommended as corroborants and aperients; in urinary obstructions, nephritic cases, ulcerations of the bladder, cachexies, and beginning dropsies. Their sensible qualities promise considerable medical activity: their taste, which they readily impart both to water and rectified spirit, and which remains entire in the inspissated extracts, is of a subtile penetrating durable kind, not very ungrateful, weak in the herb in substance, strong in the watery extract, and stronger in the spirituous.

VISCUS.

VISCUS QUERNUS Viſcum baccis albis C. B. Viſcum album Linn. MISSELTOE: a buſhy evergreen plant, with woody branches variouſly interwoven; firm narrow leaves, narroweſt at the bottom, ſet in pairs; and imperfect white flowers in their boſoms, followed each by a tranſparent white berry containing a ſingle ſeed. It grows only on the trunks and branches of trees, and may be propagated by rubbing the glutinous berries on the bark that the ſeeds may adhere.

THE leaves and branches of miſſeltoe, formerly recommended as ſpecifics in convulſive and other nervous diſorders, and now fallen into general neglect, do not appear to have any conſiderable medicinal power. Inſtances have indeed been produced of their ſeeming to prove beneficial: but as there are, perhaps, no diſorders, whoſe nature is ſo little underſtood, whoſe cauſes are ſo various, and whoſe mitigations and exaſperations have leſs dependence upon ſenſible things; there are none in which medicines operate more precariouſly, and in which the obſerver is more liable to deception.

Half a dram or a dram of the wood or leaves in ſubſtance, or an infuſion of half an ounce, the doſes commonly directed, have no ſenſible effect. Both the leaves and branches have very little ſmell, and a very weak taſte, of the nauſeous kind. In diſtillation they impregnate water with their faint unpleaſant ſmell, but yield no eſſential oil. Extracts made from them by water are bitteriſh, roughiſh, and ſubſaline: the ſpirituous extracts, in quantity ſmaller than the watery,

watery, are in taſte ſtronger, nauſeous, bitteriſh, and ſubauſtere: the ſpirituous extract of the wood has the greateſt auſterity, and that of the leaves the greateſt bitteriſhneſs. The berries abound with an extremely tenacious, not ungrateful, ſweet mucilage.

VITRIOLUM.

VITRIOLUM & Calcanthum Pharm. Pariſ. VITRIOL: a ſaline cryſtalline concrete, compoſed of metal united with a certain acid called the vitriolic acid. There are three metals with which this acid is found naturally combined, zinc, copper, and iron: with the firſt it forms a white, with the ſecond a blue, and with the third a green ſalt.

1. VITRIOLUM ALBUM *Pharm. Lond. Vitriolum album ſive Zinci Pharm. Edinb.* White vitriol, or vitriol of zinc; found in the mines of Goſlar, ſometimes in tranſparent pieces, more commonly in white efflorescences; which are diſſolved in water, and cryſtallized into large irregular maſſes ſomewhat reſembling fine ſugar; in taſte ſweetiſh, nauſeous, and ſtyptic.

The common white vitriol of the ſhops contains a quantity of ferrugineous matter; of which, in keeping, a part is extricated from the acid, in an ochery form, ſo as to tinge the maſs of a yellow hue. On diſſolving the whiteſt pieces in water, a conſiderable portion of ochre immediately ſeparates: the filtered ſolution, tranſparent and colourleſs, becomes again turbid and yellow on being made to boil, and depoſites a freſh ochery ſediment; and a like ſeparation happens, though much more ſlowly, on ſtanding without heat. Hence, when the

the ſolution is evaporated to the uſual pitch, and ſet to cryſtallize, the cryſtals generally prove foul; unleſs ſome freſh acid be added (as an ounce of the ſtrong ſpirit or oil of vitriol to a pound of the ſalt †) to keep the ferrugineous matter diſſolved: this addition both ſecures the whiteneſs of the cryſtals, and prevents their growing ſoon yellow in the air. White vitriol generally contains alſo a ſmall portion of copper, diſtinguiſhable by the cupreous ſtain which it communicates to poliſhed iron immerſed in ſolutions of it, or rubbed with it in a moiſt ſtate. The quantity of this metal is ſo exceedingly minute, that it is not, perhaps, of any inconvenience in the intentions for which white vitriol is commonly employed: the ſeparation, if it ſhould be thought neceſſary, may be effected, by boiling the ſolution for ſome time, along with bright pieces of iron, which will extricate all the copper: by continued or repeated coction, greateſt part of the ferrugineous matter alſo may be ſeparated.

† Zinc. vitriol. purif. *Ph. Lond.*

White vitriol is ſometimes given, from five or ſix grains to half a dram and more, as an emetic; and appears to be one of the quickeſt in operation of thoſe that can be employed with ſafety. Its chief uſe is for external purpoſes, as a cooling reſtringent and deſiccative: a dilute ſolution of it, as ſixteen grains in eight ounces of water, with the addition of ſixteen drops of weak vitriolic acid, is an excellent collyrium in defluxions and ſlight inflammations of the eyes, and, after bleeding and purging, in the more violent ones: a ſolution of it with alum, in the proportion of two drams of each to a pint of water, is uſed as a repellent fomentation for ſome cutaneous eruptions, for cleanſing foul ulcers, and as an ejection in the fluor albus

Aqua vitriolica *Ph. Ed.*

Aqua aluminis comp. *Ph. Lond.*

albus and gonorrhœa when not accompanied with virulence. This vitriol is ſometimes likewiſe employed as an errhine, and ſaid to be a very effectual diſſolvent of mucous matters; in which intention it is recommended, in the German ephemerides, againſt obſtructions of the noſtrils in new-born infants.

2. VITRIOLUM CÆRULEUM *Pharm. Lond.* *Vitriolum cæruleum ſive cupri Pharm. Edinb.* Blue vitriol, or vitriol of copper, commonly called Roman or Cyprian vitriol, or blue-ſtone. This kind of vitriol is in many places produced from ſulphureous ores of copper: the acid of ſulphur is no other than the vitriolic; and the inflammable principle of the ſulphur being diſſipated either by fire or by a ſpontaneous reſolution of the mineral, the acid remains combined with the copper (ſee *Pyrites*): the vitriol, now formed, is either extracted by the application of water, or waſhed out by rain or ſubterraneous waters: hence in ſome copper mines are found blue waters, which are true vitriolic ſolutions of copper, and which depoſite that metal on the addition of iron or of any other ſubſtance which the acid more ſtrongly attracts. The greateſt part of the blue vitriol, now met with in the ſhops, is prepared in England, by artificially combining copper with ſulphur or its acid.

The vitriol of copper is of an elegant ſapphire blue colour; hard, compact, and ſemitranſparent; when perfectly cryſtallized, of a flattiſh, rhomboidal, decahedral figure; in taſte extremely nauſeous, ſtyptic, and acrid. Expoſed to a gentle heat, it firſt turns white, and then of a yellowiſh red or orange colour: on increaſing the fire, it parts, difficultly, with its acid

acid, and changes at length to a very dark red calx, reducible, by fuſion with inflammable fluxes, into copper.

This ſalt, like the other preparations of copper, acts, in doſes of a few grains, as a moſt virulent emetic. Its uſe is chiefly external, as a detergent, eſcharotic, and for reſtraining hemorrhagies: for which laſt intention, a ſtrong ſtyptic liquor is prepared in the ſhops, by diſſolving three ounces of blue vitriol and three of alum in two pounds of water, then adding one ounce and a half of oil of vitriol, and filtering the mixture for uſe.

Aqua ſtyptica *Ph. Ed.*

*Blue vitriol has of late been conſiderably employed as an emetic by ſome practitioners; and is ſaid to be by no means an unſafe one, as it operates the inſtant it reaches the ſtomach, before it has time to injure by its corroſive quality. The peculiar advantage in uſing it is repreſented to be, that it has no tendency to become alſo purgative, and that its aſtringent power prevents the tone of the ſtomach from being impaired after vomiting with it. It is much recommended in the early ſtate of tubercles in the lungs; and the following method of exhibition is directed(a). Let the patient firſt ſwallow about half a pint of water, and immediately afterwards, the vitriol diſſolved in a cup-full of water. The doſe may be varied according to age, conſtitution, &c. from two grains to ten, or even twenty; always taking care to begin with ſmall ones. After the emetic is rejected, another half pint of water is to be drunk, which is likewiſe ſpeedily thrown up, and this is commonly ſufficient to remove the nauſea.

(a) Simmons, *on the Treatment of Conſumptions*, p. 70.

In

In ſtill ſmaller doſes, the blue vitriol has been much uſed by ſome as a tonic in intermittents, and other diſeaſes.

3. VITRIOLUM VIRIDE *Pharm. Lond. Vitriolum viride, ſive ferri Pharm. Edinb.* Green vitriol, or vitriol of iron; commonly called Engliſh vitriol or copperas; the Roman vitriol of the Italian writers. This ſort of vitriol is produced from ſulphureo-ferrugineous pyritæ, as the blue from ſulphureo-cupreous ones; and as the ferrugineous minerals are much eaſier of reſolution than the others, the ferrugineous vitriol is much oftener found native. In this native ſtate, neither ſort is free from an admixture of the other; the native green vitriols having always more or leſs of a bluiſh caſt, and the blue of a greeniſh. The common green vitriol is prepared in large quantity at Deptford and Blackwall near London, and at Newcaſtle, by boiling iron with the acid liquor, which runs from certain pyritæ after long expoſure to the air: this vitriol appears to be purely martial, for if it ſhould receive any cupreous particles from the mineral, the ſuperadded iron would precipitate them. All vitriols may be freed perfectly from copper by adding iron to ſolutions of them: thoſe, which contain even a ſmall portion of that metal, readily diſcover it by ſtaining the iron of a copper hue.

Pure vitriol of iron is conſiderably tranſparent, of a fine bright, though not very deep, graſs green colour; of a nauſeous aſtringent taſte accompanied with a kind of ſweetiſhneſs. Diſſolved, and ſet to cryſtallize, it ſhoots into thick rhomboidal maſſes; a part generally riſing at the ſame time in efflorescences about the ſides of the veſſel. The ſolution depoſites in ſtanding a conſiderable

a conſiderable quantity, and in boiling a much larger one, of the metallic baſis of the vitriol, in form of a ruſty calx or ochre: iron ſeems to be the only metallic body that thus ſeparates ſpontaneouſly, in any conſiderable quantity, from the vitriolic acid. On expoſing the vitriol itſelf to a moiſt air, a ſimilar reſolution happens on its ſurface; which, ſooner or later, according as the acid is more or leſs ſaturated with the metal, changes its green to a ruſty hue. In a warm dry air, it loſes a part of the phlegm or water neceſſary to its cryſtalline form, and falls by degrees into a white powder. Expoſed to a gentle fire, it liquefies and boils up; but ſoon changes, on the exhalation of the watery part that rendered it fluid, to a ſolid, opake, whitiſh or grey maſs; this, pulverized and urged with a ſtronger fire, continues to emit fumes, becomes yellow†, afterwards red, and at length, having parted with moſt of its acid as well as its phlegm, turns to a deep purpliſh-red calx‡, revivable by inflammable ſubſtances into iron.

† Vitriolum calcinatum *Pb. Ed.*

‡ Colcothar vitrioli *Pb. Ed.*

Pure green vitriol is in no reſpect different from the artificial *ſal martis*. It is one of the moſt certain of the chalybeate medicines, ſcarcely ever failing to take effect where the calces and other indiſſoluble preparations paſs inactive through the inteſtinal tube. It may be conveniently given in a liquid form, largely diluted with aqueous fluids: two or three grains or more, diſſolved in a pint or a quart of water (which from this quantity receives no diſagreeable taſte) may be taken in a day, divided into different doſes. This vitriol is uſed alſo, eſpecially when calcined, as an external ſtyptic: the ſtyptic of Helvetius, and as is ſaid that of Eaton, is no other than French brandy very ſlightly impregnated with the calcined vitriol: a

Chalcitis factitia *Pb. Pariſ.*

dram

dram of the vitriol is commonly directed to a quart of the ſpirit, but only a minute portion of the dram diſſolves in it. As French brandy has generally an aſtringent impregnation from the oaken caſks in which it has been kept, the vitriol changes it, as it does the watery infuſions of vegetable aſtringents, to a black colour; but makes no ſuch change in ſpirituous liquors that have not received ſome aſtringent tincture. Tinctura ſtyptica.

It is from the green vitriol that the acid called vitriolic has been generally extracted; by diſtilling the calcined vitriol in earthen long-necks, with a ſtrong fire continued for two days or longer. The diſtilled ſpirit appears of a dark blackiſh colour; and contains a quantity of phlegm, greater or leſs according as the vitriol has been leſs or more calcined. On committing it a ſecond time to diſtillation, in a glaſs retort placed in a ſand-heat, the phlegmatic parts riſe firſt, together with a portion of the acid, and are kept apart under the name of *ſpirit* or *weak ſpirit* of vitriol†: at the ſame time the remaining *ſtrong ſpirit*, or *oil* as it is called, loſes its black colour and becomes clear‡, and this is the uſual mark for diſcontinuing the rectification. The colleges of London and Edinburgh now directs a weak vitriolic acid of more certain ſtrength, made by mixing one part of the ſtrong acid with ſeven or eight parts of water ‖.

† Spir. vitrioli tenuis.

‡ Acidum vitriolicum *Ph. Lond. & Ed.*

‖ Acidum vitriolicum dilut. *Ph. Lond.* Acid. vitriol. tenue, *vulgo* Spiritus vitrioli tenuis *Ph. Ed.*

The ſtrong acid or oil of vitriol is the moſt ponderous of unmetallic fluids, and the moſt fixed of ſaline ones, yielding no ſmell in the greateſt heat of the atmoſphere, and requiring, to make it boil or diſtil, a heat conſiderably greater than that in which lead melts. Expoſed to the air, it imbibes its humidity, ſo as to gain by degrees an increaſe of about twice its own weight.

weight. Mixed directly with water, it produces a heat so great as to render the vessel insupportable to the hand: glass vessels are apt to crack from the suddenness of the heat, unless the commixture is very slowly performed. The most ready method of distinguishing it, in a dilute state, or when mixed with other acids, is by adding a solution of some calcareous earth, as chalk, made in any kind of acid liquor: this solution is by a minute portion of the vitriolic acid rendered milky, but suffers no change from any other species of acid; see *Selenites*.

Spir. vitrioli volat. *Stahl.*

If the long-neck, in the extrication of the acid from vitriol, happens to crack in the fire, the acid that rises after this period is found remarkably changed. It emits in the air suffocating vapours like the fumes of burning brimstone, and rises in distillation with a heat not much greater than that which the hand can bear: to the taste it discovers little corrosiveness or acidity. Combined with alkaline salts, it loses its pungent odour; but on the addition of any other acid, it is disengaged from the alkali, so as to rise again in distillation as volatile and suffocating as before. It destroys or whitens the blue and red colours of the flowers of plants; whereas, in its fixt state, like the other acids, it changes the blue to red, and heightens those which are naturally red. This volatile spirit loses its suffocating odour, and resumes its corrosiveness, fixedness, and other qualities, by exposure to the air, which seems to carry off the inflammable principle whereon its volatility depended.

Aqua sulphurata, Gas sulphuris *vulgo*.

The fumes of burning brimstone are no other than the vitriolic acid in its volatile state; see *Sulphur*. If a little burning sulphur be suspended over some water in a close vessel till the fumes

fumes ſubſide, and this repeated with freſh portions of ſulphur, till about half a pound has been uſed to a quart of water, the liquor will be found ſtrongly impregnated with the volatile ſuffocating acid, and in keeping for ſome time, if the veſſel is not cloſely ſtopt, it will become exactly ſimilar to water acidulated with the fixt acid. If a very large glaſs, open at bottom, be hung over the burning ſulphur, in a damp place ſcreened from wind, a part of the fumes will condenſe upon the ſides of the glaſs, and run down in drops, which may be collected by placing a glaſs diſh underneath: the acid thus obtained is called, from the ſhape of the veſſel that has been generally uſed for condenſing the fumes, ſpirit or oil of ſulphur by the *bell*. The quantity of acid collected by this proceſs is very ſmall, greateſt part of the fumes eſcaping: ſixteen ounces of ſulphur, in the moſt favourable circumſtances, yield ſcarcely one ounce of phlegmatic ſpirit; though it is certain, that out of this quantity of ſulphur, more than fifteen ounces are pure acid, of ſuch ſtrength, as to require being diluted with above an equal quantity of water to reduce it to the pitch of common ſpirit of ſulphur; ſo that if ſulphur could be burnt without the loſs of any of its fumes, we might obtain double its weight of an acid of the ordinary ſtrength. The proceſs has lately been improved, by ſome particular perſons, though not perhaps to this degree, yet ſo far as to afford at a very low price almoſt all the acid now ſold under the name of oil of vitriol. The improvement conſiſts chiefly in burning the ſulphur in very large glaſs veſſels, in the bottoms of which ſome warm water is placed, whoſe ſteam ſerves to collect and condenſe the fumes.

Spir. ſulph. per campanam.

THE acid of vitriol or ſulphur, largely diluted ſo as to be ſupportable or but gratefully tart to the palate, is the moſt ſalubrious of all the mineral acids. It is mixed with watery infuſions, ſpirituous tinctures and other liquids, as an antiphlogiſtic; as a reſtringent in hemorrhagies; and as a ſtomachic and corroborant in weakneſſes, loſs of appetite, and decays of conſtitution, accompanied with ſlow febrile ſymptoms, brought on by irregularities, or ſucceeding the ſuppreſſion of intermittents by Peruvian bark. In ſeveral caſes of this kind, after bitters and aromatics of themſelves had availed nothing, a mixture of them with the vitriolic acid has happily taken place: the form commonly made uſe of is that of a ſpirituous tincture: ſix ounces of oil of vitriol are dropt by degrees into a quart of rectified ſpirit of wine, the mixture digeſted for three days in a very gentle heat, and afterwards digeſted for three days longer with an ounce and a half of cinnamon, and an ounce of ginger†; or a pint of an aromatic tincture drawn with proof ſpirit is mixed with four ounces of the ſtrong acid‡: theſe liquors are given from ten to thirty or forty drops, in any convenient vehicle, at ſuch times as the ſtomach is moſt empty. A mixture of oil of vitriol with ſpirit of wine alone, in the proportion of one part of the former to three of the latter, digeſted together for ſome time, is uſed in France as a reſtringent in gonorrhœas, female fluors, and ſpittings of blood.

† Elixir vitrioli *Ph. Ed.*

‡ Elix. vitrioli acidum.

Aqua rabelliana *vulgo* Eau de Rabel. *Ph. Pariſ.*

* This acid, diluted with water, has been given internally with great ſucceſs in the itch. It was firſt uſed for this purpoſe in the Pruſſian army in 1756, and has ſince been much employed in ſeveral parts in Germany. The doſe recommended

recommended is from an eighth to a fourth of a dram of the pure acid twice or thrice a day. It is ſaid to ſucceed equally in the dry and moiſt itch; and when given to nurſes, to cure both themſelves and their children.

When oil of vitriol and rectified ſpirit of wine are long digeſted together or diſtilled, a part of the acid unites with the vinous ſpirit into a new compound, very volatile and inflammable, of no perceptible acidity, of a ſtrong and very fragrant ſmell, and an aromatic kind of taſte: this dulcified part, more volatile than the reſt, ſeparates and riſes firſt in diſtillation, and may thus be collected by itſelf. The college of London directs a pound of oil of vitriol and a pint of rectified ſpirit of wine to be cautiouſly and gradually mixed (a great conflict and heat enſuing if they are mixed haſtily) and ſet to diſtil with a very gentle heat till ſulphureous vapours begin to ariſe: that of Edinburgh orders the ſame quantity of the oil of vitriol to be dropt into four times as much of the vinous ſpirit, and the mixture to be digeſted in a cloſe veſſel, for eight days, previouſly to the diſtillation, with a view to promote the coalition of the two ingredients. The different proportions of the acid ſpirit to the vinous, in theſe preſcriptions, make no material variation in the qualities of the product, provided the diſtillation is duly conducted; for the ſmalleſt of the above proportions of acid is much more than the vinous ſpirit can dulcify, and all the redundant acid remains in either caſe behind. The true dulcified ſpirit riſes in thin ſubtile vapours, which condenſe upon the ſides of the recipient in ſtraight ſtriæ: theſe are ſucceeded by white fumes, which form either irregular

Spiritus ætheris vitriol. *Ph. Lond.*

ſtriæ or large round drops like oil; on the firſt appearance of which, the proceſs is either to be ſtopt, or the receiver changed. The ſpirit which theſe fumes afford, very different from the dulcified one, has a pungent acid ſmell like the fumes of burning ſulphur: on its ſurface is found a ſmall quantity of oil, of a ſtrong penetrating and very agreeable ſmell, readily diſſoluble in ſpirit of wine, to a large proportion of which it communicates the ſmell and taſte of the aromatic or dulcified ſpirit. The college of Edinburgh, in order to ſecure againſt any acidity in the dulcified ſpirit, order it to be rectified, by mixing it with an equal meaſure of water, in every pint of which a dram of ſalt of tartar has been diſſolved, and drawing off the ſpirit again by a gentle heat* *(a)*.

Ol. vitrioli dulce *Hoffm.*

This ſpirit, taken from ten to eighty or ninety drops, ſtrengthens the ſtomach and digeſtive powers, relieves flatulencies, promotes urine, and in many caſes abates ſpaſmodic ſtrictures, and procures reſt. It is not eſſentially different from the celebrated mineral anodyne liquor of Hoffman; to which it is frequently, by the author himſelf, directed as a ſubſtitute. It is evident, from Hoffman's writings, that his anodyne was compoſed of the dulcified ſpirit and the aromatic oil which comes over after it, but the particular proportions of the two he has no where ſpecified: the faculty of Paris directs, under the title of his preparation, twelve drops

Liquor anodynus mineralis *Hoffm.*

* *(a)* The Edinburgh college, in their laſt pharmacopœia, have manifeſtly ſhewn how little they conceive the acid to enter as a conſtituent part of this preparation, and at the ſame time have directed an effectual method of preventing its preſence in it. They order the *acidum vitriolicum vinoſum*, vulgo *ſpiritus vitrioli dulcis*, to be made by ſimply mixing one part of vitriolic ether with two of rectified ſpirit.

of

of the oil to be diſſolved in two ounces of the ſpirit; the college of Wirtemberg ſeems to think, that all the oil, and all the ſpirit, obtained in one operation, were mixed together, without regard to the preciſe quantities.

* The London college have now given a formula for making this oil, which they call *oleum vini*. A pint each of alcohol and vitriolic acid are gradually mixed, and diſtilled, with a caution that the black froth which ariſes do not paſs into the receiver. Of the diſtilled liquor, the oily part is to be ſeparated from the volatile vitriolic acid. A ſufficient quantity of cauſtic alkaline lixivium is to be added to the oily part to correct its ſulphureous odour, and then the æther is to be diſtilled from it by a gentle heat. The *oleum vini* will remain in the retort, ſwimming above a watery liquor, from which it is to be ſeparated.

In place of Hoffman's anodyne liquor they direct three drams of this oil to be mixed with two pounds of their *ſpirit of vitriolic æther*, or *dulcified ſpirit of vitriol*, as it was before called. Spirit. ætheris vitriol. comp. *Ph. Lond.*

The dulcified ſpirit is ſometimes uſed as a menſtruum for certain reſinous and bituminous bodies, which are more difficultly and languidly acted upon by pure vinous ſpirits. It is often mixed with aromatic and ſtomachic tinctures, in caſes where the ſtomach is too weak to bear the acid elixirs above-mentioned: eight ounces are commonly added to a pint of the officinal aromatic tincture†, in which it does not, like the acid undulcified, occaſion any precipitation; or the ingredients of the aromatic tincture are infuſed in the dulcified acid, inſtead of common rectified ſpirit‡. A medicine of this kind was formerly in great eſteem under the name of Vigani's volatile elixir of vitriol, the preparation † Elix. vitrioli dulce ‡ *Ph. Ed.*

of which was long kept a ſecret, and firſt made public in the *pharmacopœia reformata:* it is prepared by macerating, in ſome dulcified ſpirit of vitriol free from acidity, a ſmall quantity of mint leaves curiouſly dried, till the ſpirit has acquired a fine green colour: to prevent the neceſſity of filtration, during which the more volatile parts would exhale, the mint may be ſuſpended in the ſpirit in a fine linen cloth.

If the dulcified ſpirit, rectified as above preſcribed from a ſolution of fixt alkaline ſalt, be ſhaken with equal its quantity of a like ſolution, and the mixture ſuffered to reſt; an ethereal fluid riſes to the ſurface, and great part of the dulcified ſpirit may be recovered again from the remainder by diſtillation. I am informed by Dr. Hadley, that he has obſerved the largeſt proportion of ether to be obtained, by uſing the ſtrongeſt vitriolic acid of the ſhops with equal its quantity by meaſure of ſpirit of wine, and diſtilling immediately by a heat ſufficient to make the mixture boil; and that by this management, from three pints of oil of vitriol, and ſix pints of rectified ſpirit of wine, he obtained two pints and a half of the ether. * The following is the method preſcribed for making ether, in the laſt Edinburgh pharmacopœia. To thirty-two ounces of rectified ſpirit of wine in a glaſs retort, add at once an equal weight of ſtrong ſpirit of vitriol. Mix them gradually by gentle agitation, and immediately ſet them to diſtil in ſand previouſly heated, ſo that the mixture may be brought as ſoon as poſſible to boil, in which heat it is to be continued till ſixteen ounces are come over. The receiver muſt be cooled by water or ſnow. To this diſtilled liquor, two drams of the ſtrong alkaline cauſtic are to be added, and the diſtillation

tillation repeated in a very high retort, with a very gentle heat, till ten ounces are come over. To the reſiduum after the firſt diſtillation may be added ſixteen ounces of freſh rectified ſpirit, when more ether will be procured; and this may be ſeveral times repeated. The laſt London pharmacopœia directs ether to be made by mixing two pounds of dulcified ſpirit of vitriol with one ounce (by meaſure) of cauſtic alkaline lixivium, and diſtilling over with a gentle heat fourteen ounces by meaſure.

Liquor æthereus vitriolicus *Ph. Ed.*

Æther vitriolic. *Ph. Lond.*

The ether or ethereal ſpirit is the lighteſt, moſt ſubtile, volatile, and inflammable, of all known liquids: it quickly exhales in the air, diffuſing an odour of great fragrance: it does not mingle with water, with acid liquors, with alkaline liquors, or with vinous ſpirits, at leaſt not in any conſiderable quantity, only a ſmall portion of the ether being imbibed by them: it unites with oils in all proportions, diſſolves balſams, and reſins, and extracts the oily and reſinous parts of vegetables. It has been hitherto regarded chiefly as a matter of curioſity, nor are its medicinal qualities as yet much known*(a). Malouin looks upon it as one of the moſt perfect tonics, friendly to the nerves, cordial and anodyne; and ſays he has found it to be a good remedy in rheums, for abating coughs, eſpecially thoſe of the convulſive kind. Its great volatility renders the taking of it very incommodious: the author above-mentioned orders, as the moſt convenient form, from three to twelve drops to be dropt on ſugar or pow-

*(a) It has ſince come more into uſe in flatulent and ſpaſmodic complaints, the gout in the ſtomach, nervous aſthmas, and the like. Though it will not mix with water, it may be diffuſed in a ſufficient quantity of it ſo as to be taken without much difficulty.

dered lipuorice, a little warm water or ſome warm infuſion to be immediately added, and the whole ſwallowed directly. It has been reported to give immediate eaſe in violent headachs, by being rubbed on the temples.

The vitriolic acid ſaturates a larger quantity of fixt alkaline ſalts than any of the other acids, and diſlodges therefrom ſuch other acids as have been previouſly combined with them: of the ſtrong ſpirit or oil of vitriol, about five parts are ſufficient for eight of the common vegetable fixt alkalies. The neutral ſalt reſulting from its coalition with this kind of alkali, is of a bitteriſh taſte, very difficultly ſoluble in water, and ſcarcely fuſible in the fire: in ſmall doſes, as a ſcruple or half a dram, it is an uſeful aperient; in larger ones, as four or five drams, a mild cathartic, which does not paſs off ſo haſtily as the *ſal catharticus*, and ſeems to perform its office more thoroughly. This ſalt has been commonly prepared with the alkali obtained from tartar, and is hence called vitriolated tartar: ſome dilute the oil of vitriol with ſix times the quantity of warm water, and drop into it a ſolution of the alkaline ſalt till a freſh addition occaſions no further effervescence: others direct it to be made from the reſiduum after extracting the nitrous acid from nitre by means of the vitriolic (ſee *Nitrum*), but in order to get rid of the ſuperfluous acid the matter is firſt to be expoſed to a ſtrong heat, and then diſſolved in boiling water, and the ſalt cryſtalliſed.

Sal enixum & Arcanum duplicatum *quibuſdam.*

Alcal. fix. veget. vitriol. *vulgo* tartarum vitriolatum *Ph. Ed.*

Kali vitriolat. *Ph. Lond.*

With the mineral fixt alkali, and the earth called magneſia, this acid forms compound ſalts of a bitterer taſte, ſomewhat leſs purgative, and much eaſier of ſolution, than that with vegetable alkalies: with volatile alkalies a very pungent ammoniacal ſalt, whoſe medicinal effects

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are not well known. The ſtrong acid, boiled on argillaceous earths to dryneſs, corrodes a portion of them, and concretes therewith into an auſtere ſtyptic ſalt. Calcareous earths it does not diſſolve into a liquid ſtate, but may be combined with them, by precipitation from other acids, into an indiſſoluble concrete ſeemingly of no medicinal activity. Among metallic bodies, it diſſolves zinc and iron readily; copper, ſilver, quick-ſilver, lead, and tin, very difficultly: it is fitted for acting on the two firſt by dilution with three or four times its quantity of water: the others require the undiluted acid, and a heat ſufficient to make it boil; when, the more phlegmatic parts exhaling, ſo much of the pure acid matter remains combined with the metals, as to render them, in part at leaſt, diſſoluble in water; ſee the reſpective metals.

The medical qualities of the acid in its volatile ſtate are very little known, and thoſe of the combinations thereof with alkalies not at all, though they ſhould ſeem to deſerve inquiry. The volatile acid of burning brimſtone may be commodiouſly transferred into fixt alkalies, by dipping linen cloths in a ſtrong ſolution of the alkali and ſuſpending them over the fumes, of which they will quickly imbibe ſo much as to neutralize the alkali: this neutral ſalt being rubbed off, the cloths may be again moiſtened with the alkaline lye, expoſed to the acid fumes, and theſe proceſſes alternately repeated *(a)*. The neutral ſalt thus obtained differs greatly in its taſte and other properties, and doubtleſs alſo in its medical virtues, from that which is produced by the coalition of the fixt acid with the

(a) Vide Stahlii *Experimenta & animadverſiones* ccc.

ſame

ſame alkali, that is, from vitriolated tartar. It diſſolves more eaſily in water, and ſhoots, not into octangular cryſtals, but into ſmall ſlender ones like ſhort needles. On adding to it the fixt vitriolic acid (or even the weaker acids of nitre or ſea-ſalt) the volatile acid is diſengaged from the alkali; and though, in the compound ſalt, its pungent ſmell was wholly ſuppreſſed, it now riſes in diſtillation as pungent and ſuffocating as the original fumes of the brimſtone. The neutral ſalt, in a dry form, may be kept unchanged for years: diſſolved in water, and expoſed for ſome time to the air, or if roaſted with a gentle heat, it becomes the ſame with vitriolated tartar.

ULMARIA.

ULMARIA ſive Regina prati. Barba capræ floribus compactis C. B. Spiræa Ulmaria Linn. MEADOWSWEET or QUEEN-OF-THE MEADOWS: a plant with tall, ſmooth, reddiſh, brittle ſtalks; and oval, ſharp-pointed, indented leaves, ſet in pairs along a middle rib, with ſmaller pieces between, and at the end a larger odd one divided into three ſections, wrinkled and green above, white underneath: on the tops come forth large thick cluſters of little whitiſh flowers, followed each by ſeveral crooked ſeeds ſet in a roundiſh head. It is perennial, common in moiſt meadows, and flowers in June.

THE leaves of ulmaria recommended as mild aſtringents, diſcover to the taſte or ſmell very little foundation for any medical virtues. The flowers have a ſtrong and pleaſant ſmell, in virtue of which they are ſuppoſed to be antiſpaſmodic and diaphoretic, and which in keeping

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ing is soon dissipated, leaving in the flowers only an insipid mucilaginous matter. As these flowers are more rarely used in medicine than their fragrant smell might rationally persuade, Linnæus suspects that the neglect of them has arisen from the plant being possessed of some noxious qualities, which it seemed to betray by its being left untouched by cattle: it may be observed, however, that the cattle, which refused the ulmaria, refused also angelica, and other herbs, whose innocence is apparent from daily experience.

ULMUS.

ULMUS Pharm. Lond. & Edinb. Ulmus campestris & theophrasti C. B. Ulmus campestris Linn. Elm: a tall common tree; covered with a rough, chapt, brownish, brittle bark, under which lies a white, smooth, tough, coriaceous one; producing in the spring, before the leaves appear, imperfect flowers, followed by flat roundish capsules, containing each a single seed.

The inner tough bark of the elm tree, of no manifest smell, discovers, on being chewed, a copious slimy mucilage, of no particular taste: the outer brittle bark is much less slimy, but equally void of smell and taste. It may therefore be presumed, that if elm bark has been found of use in nephritic cases, in which it is recommended by authors; or externally against burns, for which it is applied by the common people; it was of use no otherwise than as a simple emollient. Neither the purgative virtue ascribed to it by some, nor the astringent by others, appear to have any foundation.

* A decoction

* A decoction of the inner bark of elm has been employed in cutaneous diseases in some of our hospitals; and an account of its efficacy has been published by Dr. Lysons in vol. ii. of *Medical Transactions*, and since, in a separate work. In making this decoction, four ounces of the bark fresh from the tree are boiled in two quarts of water to one. It is of a beautiful light purple colour, when the elm is in flower; but browner at other times. Its taste is mildly astringent; and an extract from it is very austere. It has no purgative effects, as some have alledged, but rather the contrary. Where it succeeds, it generally at first increases the efflorescence. Patients are usually directed to drink half a pint twice a day, and to persist in the use of it some months. It is now received into the London pharmacopœia.

Decoct. ulmi *Ph. Lond.*

URINA.

URINA Pharm. Paris. URINE: The recent urine of healthy subjects is nauseously bitter, very saline, scarcely manifestly alkaline or acid. As soon as it begins to putrefy, it emits volatile alkaline vapours; and if distilled, when moderately putrefied, by a gentle heat, it yields a concrete volatile alkaline salt: as volatile alkalies have a strong antiseptic power, the vapours of putrefied urine are not observed, like those of cadaverous animal substances, to be productive of putrid diseases. A pungent caustic volatile spirit may likewise be obtained from recent urine, by inspissating, and then distilling it with the addition of quicklime.

If the putrefied urine be slowly inspissated, in glass or stone-ware vessels, to the consistence of a thin syrup, and set for some weeks in a cold

cold place, brown cryſtals will ſhoot from it, conſiſting partly of marine ſalt, and partly of a ſalt of a peculiar kind, which ſhoots before the marine, and which, by repeated ſolutions, filtrations, and cryſtallizations, may be purified both from that ſalt and from the adhering oil. In this ſtate †, it appears perfectly neutral, and impreſſes on the tongue a ſenſe of coolneſs with a ſlight bitteriſhneſs: laid on a red-hot iron, it bubbles, emits volatile alkaline vapours, and runs into a colourleſs pellucid ſubſtance reſembling fine glaſs: this apparent glaſs is manifeſtly acid, though but weakly ſo, diſſolves in water, neutralizes alkaline ſalts, and with volatile alkalies regenerates the original neutral ſalt. One of its moſt diſtinguiſhing characters is, that a mixture of it with inflammable matters, as ſoot or powdered charcoal, on being heated to ignition in an open veſſel, emits flaſhes like lightening, and, on being diſtilled in a retort with a moderately ſtrong fire, yields the highly inflammable concrete called phoſphorus.

† Sal microcoſmicum, *ſive* ſal eſſentiale urinæ.

Urine is ſometimes applied externally, boiled with bran, as a reſolvent and diſcutient, in which intentions it is ſaid to be very efficacious. Recent cows urine has been drank in the ſpring, to the quantity of a pint or more every morning, for ſeveral days, as an attenuant and deobſtruent in different diſorders: the nauſeous draught purges plentifully by ſtool, and ſometimes vomits. The peculiar ſalt of urine is but of late diſcovery, and its medicinal qualities are as yet unknown.

URTICA.

URTICA Pharm. Lond. & Edinb. Urtica urens maxima C. B. Urtica dioica Linn. COMMON STINGING NETTLE. Infuſions and decoctions of this herb, or its expreſſed juice, are recommended in different diſorders as aperients, and ſaid to looſen the belly: the juice, depurated and gently inſpiſſated, diſcovers a conſiderable taſte, of the ſubſaline kind.

UVÆ PASSÆ.

RAISINS: rich ſweet grapes, dried by the ſun's heat in the warmer parts of Europe. Two ſorts are directed for medicinal uſe. 1. UVÆ PASSÆ MAJORES *Pharm. Lond. Paſſulæ majores Pharm. Edinb.* Raiſins of the ſun; the fruit of the *vitis damaſcena* dried upon the tree; the ſtem of each cluſter, when the grapes are ripe, being cut almoſt through, ſo as to prevent the afflux of any freſh juice. 2. UVÆ PASSÆ MINORES *ſeu* CORINTHIACÆ. Currants; the fruit of the *vitis corinthiaca* picked from the ſtalks.

THESE fruits are uſed as agreeable lubricating aceſcent ſweets, in pectoral decoctions, and for obtunding the acrimony of other medicines and rendering them acceptable to the palate and ſtomach: the firſt ſort inclines moſt to acidity, the ſweetneſs of the latter being more of the mucilaginous kind. They both give out their ſweetneſs and their pleaſant flavour to water and ſpirit: the ſtones or ſeeds are ſuppoſed to communicate a diſagreeable reliſh, and hence are generally directed to be taken out; but it did not appear on trial that they give any taſte at all to water, proof ſpirit, or rectified ſpirit.

UVA

UVA URSI.

UVA URSI: Pharm. Lond. & Edinb. Vitis idæa foliis carnosis & veluti punctatis, sive idæa radix dioscoridis C. B. Arbutus (Uva Ursi) cauliculis procumbentibus, foliis integerrimis Linn. Bears whortleberry: an evergreen trailing shrubby plant; with numerous small oblong oval leaves; monopetalous white flowers with a flesh-coloured edge cut into five sections; and red berries. It greatly resembles the common red whort-bush; from which it may be distinguished, by the leaves being more oblong, and by the flower having ten stamina, and the berry five seeds; whereas the flower of the common whort has only eight stamina, and the berry often twenty seeds. It is found on the snowy hills of Austria and Styria. but more plentifully on the Swedish hills. It is also a native of the highlands of Scotland, and is now cultivated in some of our gardens.

The leaves of this plant have a bitterish astringent taste; without any remarkable smell, at least in the dry state in which they have been brought to us from Germany. Infusions of them in water strike a deep black colour with solution of chalybeate vitriol, but soon deposite the black matter, and become clear: I do not recollect any other astringent infusion, from which the blackness, produced by vitriol, separate so very speedily.

The leaves of uva ursi have of late been greatly celebrated in calculous and nephritic complaints, and other disorders of the urinary organs: the dose is half a dram of the powder of the leaves, every morning, or two or three times

times a day. De Haen relates, after large experience of this medicine in the hoſpital of Vienna, that ſuppurations, though obſtinate and of long continuance, in the kidneys, ureters, bladder, urethra, ſcrotum and perinæum, where there was no venereal taint or evident marks of a calculus, were in general completely cured by it: that of thoſe who had a manifeſt calculus, ſeveral found permanent relief, ſo that long after the medicine had been left off, they continued free from pain or inconvenience in making water, though the catheter ſhewed that the calculus ſtill remained: that others, who ſeemed to be cured, relapſed on leaving off the medicine, were again relieved on repeating its uſe, and this for ſeveral times ſucceſſively; while others obtained from it only temporary and precarious relief, the complaints being often as ſevere during the continuance of the medicine as when it was not uſed. It may be obſerved, that in ſeveral caſes which he relates, paregorics were joined to the uva urſi; and that other mild aſtringent plants have been recommended for the ſame intentions; from ſome of which De Haen himſelf expects the ſame good effects. The trials of the uva urſi, made in this country, have by no means anſwered expectation: in all the caſes that have come to my knowledge, it produced great ſickneſs and uneaſineſs, without any apparent benefit, though continued for a month.

* *WINTERANUS CORTEX.*

WINTERANUS CORTEX, Cortex magellanicus. WINTER'S BARK. The tree producing the Winter's bark *(Winterana aromatica Soland.)* is one of the largeſt foreſt trees on *Terra del Fuego.*

Fuego. Its leaves are ever-green, ſmooth, oval, and entire. Its flowers conſiſt of ſeven petals, with from fifteen to thirty ſtamina, and from three to ſix germina, terminating in as many ſtigmata. Each germen becomes a ſeed-veſſel, containing ſeveral ſeeds. The bark of the trunk of the tree is externally grey, and very little wrinkled.

The Winter's bark, which takes its name from Capt. Winter, who diſcovered it on the coaſt of Magellan in 1577, is brought to us in pieces of different degrees of thickneſs, from a quarter to three quarters of an inch. It is of a dark brown cinnamon colour, with an aromatic ſmell when rubbed, and of a pungent, hot, ſpicy taſte, which is laſting on the palate, though imparted ſlowly. A watery infuſion of it ſtruck a black colour with a ſolution of green vitriol. From an infuſion of two ounces of the bark, coarſely powdered, was obtained on evaporation an extract weighing two drams and twenty-four grains. The ſame quantity, treated with rectified ſpirit, yielded two drams of extract. A pound of the bark was infuſed in a proper quantity of water, and the liquor ſubmitted to diſtillation. The diſtilled water was clear, of a pleaſant taſte, and ſomewhat of the cinnamon flavour. There was no appearance of eſſential oil. The reſiduum afforded ſix ounces of a ſoft extract, of a grateful aromatic taſte.

A mixture of this bark ſeemed very effectually to cover and correct the diſagreeable taſte and ſmell of certain drugs; a property common to it with the canella alba.

Almoſt the only uſe hitherto made of the Winter's bark has been by the crews of ſhips navigating the ſtreights of Magellan, as a pre-

ſervative from the ſcurvy. It has been confounded in the ſhops with the canella alba, from which it is totally different.

An exact deſcription of the plant, with a figure, is contained in a paper publiſhed in the *Medical Obſ. and Inq.* vol. v. from whence this account is extracted.

ZEDOARIA.

ZEDOARIA Pharm. Lond. & Edinb. Zedoaria longa & Zedoaria rotunda C. B. ZEDOARY: the root of an Indian plant, *(Amomum ſcapo nudo, ſpica laxa truncata, Berg. Mat. Med.)* brought over in oblong pieces, about the thickneſs of the little finger and two or three inches in length; or in roundiſh ones† about an inch in diameter; of an aſh-colour on the outſide, and white within. The long ſort is ſaid by ſome to be the ſtrongeſt, but the difference, if any, is very inconſiderable, and hence the college allows both to be uſed indiſcriminately.

† Zerumbeth *Ph. Pariſ.*

THIS root has an agreeable ſmell, and a bitteriſh aromatic taſte. It impregnates water with its ſmell, a ſlight bitterneſs, a conſiderable warmth and pungency, and a yelloviſh brown colour: the reddiſh-yellow ſpirituous tincture is in taſte ſtronger, and in ſmell weaker, than the watery. In diſtillation with water, it yields a thick ponderous eſſential oil, ſmelling ſtrongly of the zedoary, in taſte very hot and pungent: the decoction, thus deprived of the aromatic matter, and concentrated by inſpiſſation, proves weakly and diſagreeably bitter and ſubacrid. A part of its odorous matter riſes alſo in the inſpiſſation of the ſpirituous tincture: the remaining extract is a very warm, not fiery, moderately

moderately bitter aromatic, in flavour more grateful than the zedoary in ſubſtance.

Zedoary root is a very uſeful warm ſtomachic. It was employed by ſome as a ſuccedaneum to gentian root; at a time when a poiſonous article, mixed with the gentian brought from abroad, rendered its uſe hazardous: but from the above analyſis it appears to be not entirely ſimilar to that ſimple bitter; its warm aromatic part being the prevailing principle, in virtue of which, its ſpirituous extract (the moſt elegant preparation of it) is made an ingredient in the cordial confection of the London pharmacopœia.

ZIBETHUM.

CIVETTA. Civet: a ſoft unctuous odoriferous ſubſtance, about the conſiſtence of honey or butter; of a whitiſh, yellowiſh, or browniſh colour, and ſometimes blackiſh; brought from the Brazils, the coaſt of Guinea, and the Eaſt Indies; found in certain bags ſituated in the lower part of the belly of an animal of the cat kind*(a). The bag has an aperture externally, by which the civet is ſhed or extracted.

This ſubſtance has a very fragrant ſmell, ſo ſtrong as, when undiluted, to be diſagreeable; and an unctuous ſubacrid taſte. It is uſed chiefly in perfumes, rarely or never for medicinal purpoſes, though the ſingular effects which muſk has been found to produce may ſerve as an inducement to the trial. It unites with oils, both expreſſed and diſtilled, and with animal fats: in watery or ſpirituous liquors it does not diſſolve, but both menſtrua may be ſtrongly

*(a) Or rather of the weaſel kind.

impregnated with its odoriferous matter, water by diſtillation, and rectified ſpirit by digeſtion: by trituration with mucilages, it becomes ſoluble in water.

ZINCUM.

ZINCUM Pharm. Lond. & Edinb. ZINC, or TUTENAG: a bluiſh white metal; crackling, in being bent, like tin, and quickly breaking; about ſeven times ſpecifically heavier than water; beginning to melt in a moderate red heat, and very ſlowly calcining on a continuance of the fire; in a moderate white heat flowing thin, burning, fulgurating, with a bright deep green or bluiſh green flame, and ſubliming into light white flowers, which concrete about the upper part of the veſſel, or on the bodies adjacent, into thin cruſts, or ſoft looſe filaments like down or cobwebs. In its metallic form, and in that of a calx or flowers, it diſſolves readily in all acids, and precipitates from them almoſt all the other metallic bodies.

The calces or flowers of zinc are difficultly revived into their metallic form. Though perfectly fixed in the fire ſo long as they continue in a ſtate of calx; yet, as calces in general require for their revival a greater heat than that in which the metal itſelf melts, and as a full melting heat is the greateſt that zinc can ſupport; the inſtant they are revived, they burn and calcine again in open veſſels, and eſcape through the pores of cloſe ones. Hence ſome ores and preparations of this metal have been long kept in the ſhops, and even chemically examined, without being diſcovered to be ſuch. The revival may be effected, by uſing compact veſſels of ſuch a ſtructure, that the zinc, in proportion

portion as it is restored to its metallic form by the charcoal powder or other inflammable additions commonly made use of for those purposes, may be suffered to sublime or run off from the heat without being exposed to the outward air; or by adding some other metallic substance to detain it, as copper, which is thus changed into brass.

This metal has but lately been received into the shops in its own form; in which it deserves a place, as affording preparations superiour to the ores or productions of it now made use of. A white vitriol made from pure zinc, by dissolution in the diluted vitriolic acid and crystallization †, is doubtless preferable for medicinal use to the common impure white vitriol; and the white flowers, into which it is changed by deflagration ‡, to the very impure calamine and tutty. Moderately pure white flowers, sublimed from it in the brass or other furnaces, wherein zinc or its ores are melted with other metals, were formerly kept in the shops, and distinguished by the names of *pompholix* and *nihil album*.

† Vitriolum album *Ph. Ed.*

‡ Calx zinci *vulgo* flores zinci *Ph. Ed.* Zincum calcinat. *Ph. Lond.*

* The flowers of zinc were first used as an internal medicine by the celebrated chemist Glauber, but were little known in practice till Dr. Gaubius, of Leyden, gave an account of their virtues in his *Adversaria*. They have since been much employed in convulsive and spasmodic diseases, and sometimes with good effects. Even obstinate epilepsies have been rendered much less violent by their use. Like all other medicines, however, in diseases of this class, their good effects are often only temporary, and they often fail altogether. When the flowers are genuine, a grain or two generally at first excites nausea or sickness, but by degrees a

considerable dose may be taken with little or no sensible effect. As they are liable to be adulterated, it may be proper to mention, as tests of their purity, that they make no effervescence with acids; and that, when exposed to a strong heat, they become yellow, but on cooling, turn white again. An application for external use, made by mixing one part of flowers of zinc with six of the simple liniment of wax and oil, is directed in the Edinburgh pharmacopœia.

Unguent. e calce zinci *Ph. Ed.*

ZINGIBER.

ZINGIBER Pharm. Lond. & Edinb. & C. B. GINGER: the root of a reed-like plant *(Amomum Zingiber Linn.)*, growing spontaneously in the East Indies, and cultivated in some part of the West; brought over in knotty branched flattish pieces, freed from the outer bark, of a pale colour and fibrous texture: that which is least fibrous is accounted the best.

THIS warm aromatic root, of common use as a spice in flatulent colics, &c. appears to be much less liable to heat the constitution than might be expected from the penetrating heat and pungency of its taste, and from the fixedness of its active principles. It gives out the whole of its virtue to rectified spirit, and great part of it to water, tinging the former of a deep, the latter of a pale yellow colour: the spirituous tincture, inspissated, yields a fiery extract, smelling moderately of the ginger: the watery infusion, boiled down to a thick consistence, dissolved a fresh in a large quantity of water and strongly boiled down again, retains still the heat and pungency of the root, though little or nothing

thing of its ſmell: there does not ſeem to be any of the common ſpices whoſe pungency is of ſo fixed a kind. In the ſhops are kept a ſyrup made from an infuſion of three† or four‡ ounces of the root in four† or three‡ pints of boiling water, which is agreeably impregnated with its warmth and flavour; and the candied ginger‖, brought from abroad, which is likewiſe moderately aromatic.

Syr. zingib.
† *Ph. Ed.*
‡ *Ph. Lond.*
‖ Zingiber conditum *Ph. Ed.*

ADDENDA.

ANGUSTURÆ CORTEX.

IN the year 1788 a conſiderable quantity of a bark, not before known in this country, was imported from the Weſt Indies, but as of African growth. The only account ſent with it was, "that it had been found very ſuperior to the Peruvian bark in the cure of fevers." In the ſucceeding year, two letters were publiſhed in the *London Medical Journal* for 1789, part ii. from Dr. J. Ewer, and Dr. Alexander Williams, phyſicians at Trinidad in South America, containing a deſcription of this bark under the name of Cortex Anguſturæ, and giving an account of its medicinal effects. It is there ſaid to come from the Spaniards in Anguſtura; and this is confirmed by the ſubſequent importation of parcels of it from Cadiz and the Havanna. No accurate account, however, has yet been obtained of the place of its growth, nor does the name of Anguſtura ſeem to belong to a particular diſtrict, but rather to be the Spaniſh term for

for a narrow pafs between mountains. The fuppofition is, that the tree producing it grows on the banks of the river Oronoko. Not the leaft inſight has been gained into the ſpecies of vegetable whence this bark is derived; for although Mr. Bruce, who had been cured of a dyſentery in Abyſſinia by the bark of a ſhrub called the *Wooginoos*, now cultivated in Kew and other gardens under the name of *Brucea antidyſenterica* or *ferruginea*, declared that it appeared to him from recollection to be the ſame; yet Dr. Duncan, in his *Medical Commentaries* for 1790, aſſerts, that upon compariſon, the two barks ſeem eſſentially different. At preſent, therefore, it muſt be conſidered as a drug of unknown origin, though its ſenſible qualities and medical powers have been well aſcertained by the experiments of various perſons.

Mr. Brande, apothecary to the queen, who publiſhed an account of this bark firſt in the *London Medical Journal*, and then in a ſeparate pamphlet, thus deſcribes it. "There is a conſiderable variety in the external appearance of the "Anguſtura bark, owing, however, probably, "to its having been taken from trees of different ſizes and ages, or from various parts of "the ſame tree, as the taſte and other properties perfectly agree. Some parcels which I "have examined, conſiſt chiefly of ſlips, torn "from branches, which could not have exceeded the thickneſs of a finger: theſe are "often ſmooth, three feet or more in length, "and rolled up into ſmall bundles. In others, "the pieces have evidently been, for the greater "part, taken from the trunk of a large tree,

"and

" and are wrinkled, and nearly flat, with quills " of all sizes intermixed.

" The outer surface of the Angustura bark, " when good, is in general more or less wrinkled, " and covered with a coat of a greyish white, " below which it is brown, with a yellow cast: " the inner surface is of a dull browniſh-yellow " colour. It breaks short and resinous. The " smell is singular and unpleasant, but not very " powerful: the taste intensely bitter, and " slightly aromatic; in some degree resembling " bitter almonds, but very lasting, and leaving " a sense of heat and pungency in the throat. " This bark, when powdered, is not unlike the " powder of Indian rhubarb. It burns pretty " freely, but without any particular smell."

With respect to its habitude to menstrua, it yields its taste and flavour to water, cold and hot, to rectified and proof spirit, and to wine. The watery extract is large in quantity, bitter, but not acrid. After the action of water, the residuum imparts colour, and great acrimony, with nauseousness, to spirit. The spirituous extract is much less in quantity, and consists of less than a fourth of resin, the rest being partly gum, and partly a greasy matter, in which the acrid taste and unpleasant smell of the subject appear to reside. Water distilled from the Angustura bark bruised had a singular flavour, somewhat resembling that of strong parsley water. A small portion of white essential oil swam on the surface, which possessed the full smell of the bark, was acrid, and left a glow in the mouth like camphor. The preparations of this bark are not affected in colour by the addition of vitriol of iron.

Mr.

Mr. Brande made various experiments to aſcertain the comparative antiſeptic power of the Anguſtura bark; from the reſult of which, it appears to rank very high among the vegetables poſſeſſing that quality, not one of the ſubſtances with which he compared it ſeeming to have the advantage of it.

With reſpect to its medicinal qualities, from the teſtimony of the gentlemen at Trinidad as well as thoſe who have tried it in theſe climates, it appears to act as a very powerful tonic, and to be particularly efficacious in fevers of the intermittent kind, dyſenteries and diarrhœas. In large doſes it is apt to occaſion nauſea, or to purge; but in ſmaller ones, it ſits eaſy on the ſtomach, and is free from that common inconvenience of the Peruvian bark, of cauſing a ſenſe of weight and fulneſs. Indeed, the efficacy of moderate doſes is a peculiar advantage of the Anguſtura bark; from ten to twenty grains of the powder, and from one ounce to one and a half of the infuſion or decoction with a portion of the tincture, having been found ſufficient, a few times repeated, to prevent the paroxyſms of an intermittent. In diarrhœas and dyſenteries, after the due exhibition of laxatives, its effects are uſually very ſpeedy. Mr. Wilkinſon of Sunderland (*Lond. Med. Journ.* for 1790, part iv.) who has employed it extenſively, found it peculiarly efficacious in low or nervous fevers, and the irregular intermittents of children, uſually termed worm-fevers. As a general tonic, Mr. Brande thinks it ſuperior to every other medicine of that claſs; and this is the light in which Dr. Pearſon regards it, who rather compares it to the warm bitters, ſuch as camomile, than to the Peruvian bark.

bark. Dr. Ewer mentions a caſe in which its external application in a mortification proved very effectual. On the whole, it appears not to be doubted that this bark is a valuable addition to the claſs of tonics of the higher order, and it is to be hoped that we ſhall not long be left ignorant of its natural hiſtory and botanical character.

BARYTES.

A SUBSTANCE of a ſparry appearance found in mines, called *cauk* or *calk*, has by the later chemiſts been diſcovered to contain an earth, the properties of which entitle it to form a new genus among earthy bodies. From its remarkable ſpecific gravity, it has obtained the name of *terra ponderoſa*, or *barytes*; and is now found to exiſt in various combinations, particularly, united with the vitriolic, and with the aerial acids. It was from the firſt ſuſpected to be of a metallic nature by that eminent chemiſt Profeſſor Bergman; and Dr. Withering, in ſome excellent obſervations and experiments on it publiſhed in the *Philoſ. Tranſactions* (vol. lxxiv. part ii.) places it between the earths and the metallic calces. Its native combinations exert deleterious effects upon animals; and its artificial ones, though milder, are capable of acting with violence in moderate quantities; a farther preſumption of its metallic nature, ſince no combinations of the ſimple earths ſhew any activity of that kind. From the aerated barytes an artificial combination has been made with the muriatic

muriatic acid, which has been introduced into medicine.

Dr. Crawford, in the year 1789, made ſeveral trials in St. Thomas's hoſpital of the muriated barytes, the reſult of which was publiſhed in the *Medical Communications*, vol. ii. The preparation he uſed was a ſaturated ſolution of the ſalt in water; but in part of the caſes this ſalt was not the pure muriated barytes, but had a mixture of an eighth of muriated iron; the medical effects, however, of the pure and the compound ſalt were not found to be ſenſibly different. The caſes in which it was uſed with the moſt ſtriking ſucceſs were ſcrofula in its different forms and combinations, with ſwelled glands, foul ulcers, enlarged joints, and general cachexy. Some of theſe which had reſiſted the uſual remedies, were ſingularly relieved by the muriated barytes, either given alone, or in conjunction with mercurial and antimonial medicines and bark. The doſe varied from two drops to twenty, twice a day; few patients, however, could bear more than from ſix to ten without nauſea; and it did not appear that by habit the ſtomach was enabled to bear a conſiderable increaſe of doſe, but rather the contrary. In a few inſtances this medicine appeared to increaſe the cuticular ſecretion; in moſt it occaſioned an unuſual flow of urine: and almoſt univerſally improved the appetite and general health. Sometimes it produced vertigo, an effect apparently connected with its nauſeating quality. It is not to be doubted, Dr. Crawford obſerves, that if adminiſtered injudiciouſly, it is capable of producing deleterious effects, both by diſordering the nervous ſyſtem, and bringing on violent vomiting and purging. From trials made upon dogs, it appears

appears that a very large doſe would prove fatal.

It may be proper to mention, that the aerated barytes is found in the lead mine of Anglezark, near Chorley in Lancaſhire, and as far as appears, there only in England. [See a paper by Mr. James Watt, junior, in the third volume of the *Mancheſter Society's Memoirs.*]

PIPER INDICUM.

A SINGULAR uſe of this ſubſtance is mentioned in two letters from John Collins, Eſq. of the iſland of St. Vincent, inſerted in the ſecond volume of the *Medical Communications.* In a peculiar kind of angina maligna prevailing among children in that iſland, which began with blackneſs, ſloughineſs and ulceration of the fauces and tonſils *without fever*, and proved extremely fatal, he was induced, from a letter publiſhed by a Mr. Stewart of Grenada, to exhibit the following remedy. "Take two table-ſpoonfuls "of ſmall red pepper, or three of the common "Cayenne pepper, and two tea-ſpoonfuls of fine "ſalt; beat them into a paſte, and then add to "them half a pint of boiling water. Strain off "the liquor when cold, and add to it half a pint "of very ſharp vinegar. Let a table-ſpoonful "of this liquor be taken every half hour as a "doſe for an adult; diminiſhing it in proportion "for children." The extreme acrimony of this preparation rendered it difficult to be exhibited, and its effects were to inflame and excoriate the throat; but by this the ſloughs were entirely cleanſed away, the ulcers brought to a healing ſtate,

ſtate, and the diſeaſe removed. It is to be obſerved, that ſucceſs was to be expected chiefly when the medicine was adminiſtered in its early ſtage, before the fever had come on, while the power of ſwallowing was little impaired, and the affection ſeemed nearly a local one. Its uſe is farther confirmed by a letter from Mr. James Stephens of St. Chriſtopher's to Dr. Duncan, printed in the *Med. Comment.* for 1787.

It appears likewiſe that the capſicum has been given with great ſucceſs in the intermittents prevalent in Guiana, and for the ſuppreſſion of vomitings in putrid fevers.

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